Large Filing Separator Sheet

Case Number: 17-32-EL-AIR
                 17-33-EL-ATA
                 17-34-EL-AAM

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Section   4 OF 22

Number of Pages: 273

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BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in Electric Distribution Rates.	)))	Case No. 17-32-EL-AIR
In the Matter of the Application of Duke Energy Ohio, Inc., for Tariff Approval.	)))	Case No. 17-33-EL-ATA
In the Matter of the Application of Duke Energy Ohio, Inc., for Approval to Change Accounting Methods.	)))	Case No. 17-34-EL-AAM

VOLUME 3

SCHEDULE (S-4.2)
PART 2 OF 2

March 2, 2017

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DUKE ENERGY CORPORATION
DUKE ENERGY OHIO, INC.
SUMMARY OF MANAGEMENT POLICIES, PRACTICES AND ORGANIZATION*
SCHEDULE S-4.2

PART 2 of 2

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DUKE ENERGY CORPORATION
DUKE ENERGY OHIO, INC.
SUMMARY OF MANAGEMENT POLICIES, PRACTICES AND ORGANIZATION
CORPORATE COMMUNICATIONS DEPARTMENT
SFR Reference: Chapter II (B)(9)(d)(i,v), Chapter II (B)(9)(e)(iv)

I.   Policy and Goal Setting

The Corporate Communications Department does not issue policy statements, but supports the corporate policies and objectives through the Department directives, procedures and practices.

Goals for the department are set annually by a participative process involving leadership of the department. These goals are designed to support the business plan of the Strategy and Policy department as well as the corporate business plan. In conjunction with the development of department goals, individual annual performance goals are established to assign the resources necessary to achieve the overall corporate business plan as developed by senior management. All department members participate in semi-annual reviews of their annual performance goals. Adjustments are made where necessary.

The Corporate Communications Department conveys its goals through its annual business plan:

- To communicate timely, accurate and relevant information to all of our key stakeholders (i.e. customers, shareholders, employees, and the communities we serve);
- To establish, maintain and strengthen communications between the Company and its stakeholders;
- To broaden our stakeholders' understanding and confidence about the company's operations; and
- To inform employees on the Company strategy, policies, objectives, operations and activities.

II.   Strategic Planning

Departmental strategic planning in Corporate Communications is coordinated between the Senior Vice President and Chief Communications Officer and the department managers and involves structured input and feedback from senior executives and Department staff members. Regular staff meetings are held to discuss pending issues and to decide what items require attention and the time frame under which the issue is to be addressed. A participative process is used to identify major internal and external issues and to develop response strategies. In addition,

previous programs are reviewed and budget resources are reallocated to meet those needs for the following year, which have been identified as having priority.

III. Organizational Structure

The Senior Vice President and Chief Communications Officer reports directly to the Executive Vice President and Chief Legal Officer of Duke Energy. The Corporate Communications Department is divided into the following sections: Corporate Reputation and Media; Customer and Regulated Utilities Communications; Regulated Generation, Transmission and Emergency Planning Communications; Environmental Issues Management; Advertising, Brand, Creative and Digital Communications; and Operations. The Corporate Reputation and Media group is managed by a vice president and other sections are managed by directors. All report directly to the Chief Communications Officer.

An organization chart is attached as Exhibit CC-1.

IV. Responsibilities

This Department has general charge of employee communications, customer communications, advertising, financial communications, executive support and media relations support for the company.

The Department is responsible for internal publications directed at employees, external publications for businesses, shareholders, and customers, special publications that may be required from time to time, crisis/storm response communications, news releases and advertising. Other responsibilities include coordination of all activities regarding the news media, including news conferences, interviews, and responses to questions regarding Duke Energy's operations and activities. The Department writes speeches and prepares presentations for Company executives for both internal and external audiences. The Department also maintains regular contact with individuals throughout the company through attendance at other department staff meetings and ongoing communications about day-to-day operations, events and issues as they occur.

V. Practices and Procedures

The Corporate Communications Department activities are reviewed through an approval process involving the Chairman and CEO, EVP and Chief Legal Officer and select senior executives and committees. All published information for external distribution is reviewed by corporate or department senior management.

Department personnel maintain close working relationships with nearly all areas of the company through individuals in the department being assigned as liaisons with the business units, and Shared Services and Corporate Center. An internal network consisting of key personnel with management responsibilities or technical and

subject-matter expertise has been established to provide a group of trained individuals who can respond to external and internal inquiries in detail on topics in their area of expertise. News releases are reviewed and approved by appropriate technical, legal and senior management personnel.

VI.   Decision-Making and Control

Departmental decision-making and control are based on the support for the Company's business plan and input from other departments and senior executives. Day-to-day decision-making is handled by the Director, Customer and Regulated Communications and other direct reports to the Chief Communications Officer in coordination with the Chief Communications Officer and necessary senior management executives and other departments, (e.g., Legal). The department is involved in both proactive and reactive issues, and staff consults frequently with management and expert technical personnel from other departments to determine appropriate responses. Major decisions are reviewed with senior management for input and concurrence. Budget requests and variances are approved by senior management.

The department has moved decision-making to the lowest practical level in the organization. Managers have authority to make decisions affecting their area within budget limitations and general guidance. Managers provide weekly reports of activities and issues confronted, which are used to keep departmental management and senior management informed. Corporate activities and issues are relayed from the Senior Vice President and Chief Communications Officer at regular senior staff meetings, and information is exchanged about emerging issues internally and externally.

VII.   Internal and External Communication

The total communications program is designed to provide a basis for the Company's stakeholders to gain additional knowledge of the company and improve perceptions of the role energy plays in the community. The department works closely with the news media and with customer contact personnel to provide pertinent information and to increase public awareness and understanding of major issues. An Annual Report to Shareholders is prepared each year in conjunction with the Investor Relations Department.

Additionally, the Corporate Communications Department produces a variety of internal communications materials, primarily distributed electronically. *This Week @ Duke Energy* (Exhibit CC-2) is published once a week and is distributed throughout the organization. It summarizes current news events about the Company, its employees, and the utility industry. It is distributed in the Company e-mail to more than 28,000 employees.

Corporate Communications maintains and updates the corporate content of the Company Web site, www.Duke-Energy.com, ensuring that it is timely and accurate for key Company stakeholders, and to ensure consistency of key messages throughout the entire Web site.

The department also produces special employee information pieces, such as video updates, brochures, posters and campaigns on corporate activities.

VIII.   Goal Attainment and Qualification

Several research tools are used to judge the effect of the programs implemented by the Corporate Communications Department.   They included regular customer satisfaction surveys, employee surveys, publications surveys, established feedback loops with internal clients, and media tracking/analysis.   Comments from customers, shareholders and employees are also used to judge the effectiveness of communications vehicles.

Certain criteria in survey data are identified to become benchmarks on which the effect of certain programs will be measured. In addition, overall attitudes toward the Company determine if there are specific changes that can be addressed through communications programs.

Exhibit CC-1

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                        │     SVP Chief Comm Officer        │
                        │ 21537 - Corporate Communications  │
                        │              (110)                │
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| VP Corp Reputation & Media
25435 - Corporate Reputation &
Media
(23) | Executive Assistant II | Communications Operations Mgr
25241 - Corporate Communications
Ops
(0) | Dir Reg Utilities Comm
45311 - Regulated Utilities Comm
(14) |

| Dir Reg Gen & Emergency Plng
23902 - Reg Generation & Transm
Comm
(18) | Dir Coal Ash Communications
19571 - Policy & Environmental
Comm
(5) | Dir Creative & Digital Comm
43396 -
Adv,Brand,Creative&DigitalComm
(43) |

DUKE ENERGY CORPORATION
DUKE ENERGY OHIO, INC.
SUMMARY OF MANAGEMENT POLICIES, PRACTICES & ORGANIZATION
GOVERNMENT AND REGULATORY AFFAIRS DEPARTMENT
SFR Reference: Chapter II (B)(9)(d)(v)

I.   Policy and Goal Setting

The Government and Regulatory Affairs Department (Department), as part of the Government, Regulatory and Community Affairs Organizations, has general charge of state governmental and regulatory relations.   It maintains communications with elected and appointed government officials on activities and public policy issues related to the Company and its operations, informs the Company of regulatory and legislative issues, and coordinates the development of Company policies and positions on these issues.

The Department supports the corporate policies and objectives as described in the Working Environment Policy Manual through Department directives, procedures and practices.

The Department establishes policies to implement corporate and state level policies.   The Department uses participative management techniques in establishing department policies and goals.   Those impacted by the policies or goals will have the opportunity to contribute to the discussions and review the work product during the development process.   Final approval of the goals and policies rests with the senior management involved, but it is understood that successful implementation of any policy or goal can be assured only through the support of those involved.

Individual and team goals are set annually through a process which identifies weighted key success factors and measures at the beginning of the year, combines these substantive goals with behavioral and corporate financial goals, and includes an evaluation of achievement at the end of the year.

II.   Strategic Planning

Departmental strategic planning in Government and Regulatory Affairs is coordinated between the Vice President, Government, Regulatory and Community Affairs-Ohio and the President of Duke Energy Ohio and Kentucky. Regular staff meetings are held to discuss pending issues and decide what items require attention and the time frame under which issues are to be addressed.   In conjunction with the development of annual individual and team goals, resources are directed toward the overall corporate goals as developed by executive

management. A participative process is used to identify major internal and external issues and to develop response mechanisms. All department personnel are involved in planning and review sessions. In addition, previous programs are reviewed and budget resources are reallocated to meet those needs for the following year that have been identified as having priority.

III. Organizational Structure

The Vice President of Government and Community Affairs-Ohio reports directly to the President of Duke Energy Ohio and Kentucky. The Department is divided into one division:

- Ohio Government and Regulatory Affairs

An organizational chart is attached as Exhibit GRA-1.

IV. Responsibilities

This Department has general charge of state governmental relations, and also state regulatory affairs. It maintains liaisons with elected and appointed government officials on activities related to the Company and its operations, informs the Company of regulatory and legislative issues, and coordinates the development of Company policies and positions on these issues. The Department's responsibilities include:

- Establishing, maintaining, and strengthening communications between the Company and legislative, political and regulatory constituents;
- Providing timely and relevant information about the Company;
- Broadening legislative, political, regulatory, and environmental understanding and confidence about Company operations;
- Drafting, reviewing, negotiating and promoting legislative initiatives with the Ohio General Assembly;
- Drafting position statements; reviewing, analyzing and responding to various regulatory initiatives; and presenting the Company's position on regulatory policy matters before state regulatory policymaking bodies including, but not limited to, the Public Utilities Commission of Ohio and other state agencies;
- Informing other employees in the Company of important legislative, political and regulatory developments and aid in the analysis of these developments as they relate to the Company's business interests; and
- Assisting in the administration of the Company's Political Action Committee and its Grassroots network.

V.   Practices and Procedures

Department personnel maintain close working relationships with nearly all areas of the Company, and work with appropriate Company personnel to develop legislative, regulatory, and environmental positions. Prior to representing the Company on any issue, departmental personnel receive guidance and clearance from the Department's Vice President and executive management.

VI.   Decision-Making and Control

Departmental decision-making and control are based on department goals and input from other departments. The Department is both proactive and reactive on public policy issues and communications with policymakers and consults frequently with management and expert technical personnel from other departments to determine appropriate responses. Major decisions are reviewed with senior management for input and concurrence. Budget requests and variances are approved by senior management.

VII.   Internal and External Communication

The Department is the primary communication conduit of the Company for legislative, regulatory, and environmental advocacy developments and for Company positions which need to be relayed to appropriate legislative and regulatory bodies. Timekeeping requirements and periodic education on restrictions such as *ex parte* communications, lobbying laws and reporting requirements assure compliance with all applicable rules and regulations regarding communications with lawmaking and regulatory bodies.

Corporate activities and issues are relayed from the Vice President to the Department employees at regular staff meetings and information is exchanged about emerging issues internally and externally.

VIII.   Goal Attainment and Qualification

Annual individual and team goals, set at the beginning of each calendar year, are reviewed quarterly and at year-end to determine achievement levels and to make any revisions which may be appropriate, given changed circumstances. Evaluations include the level of difficulty and effort exerted to achieve each goal, the achievement level itself, and whether each goal was pursued in a manner which benefited the Company's image and which exhibited individual behavioral traits valued by the Company, such as honesty, respect, and a high degree of professionalism.
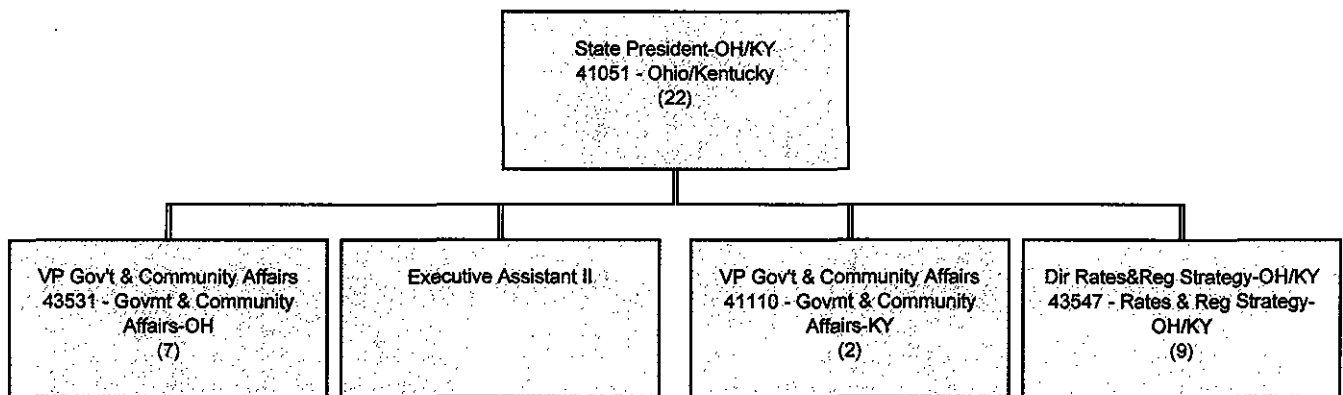
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| VP Gov't & Community Affairs 43531 - Govmt & Community Affairs-OH (7) | Executive Assistant II | VP Gov't & Community Affairs 41110 - Govmt & Community Affairs-KY (2) | Dir Rates&Reg Strategy-OH/KY 43547 - Rates & Reg Strategy-OH/KY (9) |

DUKE ENERGY CORPORATION
DUKE ENERGY OHIO, INC.
SUMMARY OF MANAGEMENT POLICIES, PRACTICES & ORGANIZATION
COMMUNITY AFFAIRS DEPARTMENT
SFR Reference: Chapter II (B)(9)(d)(i,v), Chapter II (B)(9)(i)(v)

I.   Policy and Goal Setting

The Community Affairs Department (Department), as part of the Government, Regulatory and Community Affairs Organization, implements plans and strategies that increase customer satisfaction, strengthen relationships and enhance the Company's image with large customers, local governmental agencies and community leaders. Community Affairs Managers leverage a proactive planning process to identify customer and stakeholder needs and coordinate with other departments to deliver proactive service and solutions.

Department policies and approval levels align with corporate policies and objectives. All purchases, expenditures and transactions comply with Duke Energy's Approval of Business Transaction Policy. Compliance with policies, either corporate or departmental, is everyone's responsibility. Compliance is measured in various ways, including cost reports for tracking budget performance, schedules tracking project milestones and performance appraisals that measure performance in meeting goals. In addition, it is the responsibility of management at all levels to audit its operation for compliance.

Department goals support Duke Energy Ohio priorities and align with the broad objectives established at the corporate level. Individual and team goals are set annually through a process which identifies weighted key success factors and measures at the beginning of the year, combines these substantive goals with behavioral goals and corporate financial goals, and includes an evaluation of achievement at the end of the year.

Participative management techniques are used to allow employees affected by Department goals an opportunity to contribute to discussions and review the goals, measures and plans. Final approval of the goals and policies rests with the senior management involved, but it is understood that successful implementation of any policy or goal can be assured only through the support of those involved.

II.   Strategic Planning

Strategic planning is developed by the Vice President, Government and Community Affairs-Ohio and the President of Duke Energy Ohio and Kentucky. Planning involves structured input and feedback from senior management and staff members

from State Governmental and Regulatory Affairs, Rates, Power Delivery, Gas Operations and Grid Solutions. Regular staff meetings are held to discuss pending issues and decide what items require attention and the time frame under which issues are to be addressed. In conjunction with the development of annual individual and team goals, resources are directed toward the overall corporate goals as developed by executive management. Feedback from customer satisfaction surveys and employees is used to identify major internal and external issues and to develop response mechanisms. In addition, previous programs are reviewed and budget resources are reallocated to meet those needs for the following year that have been identified as having priority.

III.   Organizational Structure

The Department is divided into four geographic areas: Ohio North, Hamilton County, excluding the City of Cincinnati, the City of Cincinnati and, Ohio East. Community Affairs Managers are responsible for directing activities within the geographic areas and report to the Vice President, Government, Regulatory and Community Affairs-Ohio.

An organizational chart is attached as Exhibit CR-1.

IV.   Responsibilities

The Community Affairs Manager's responsibilities include:

- To manage, lead, direct, facilitate, coordinate and represent Duke Energy's presence within assigned geographical areas;
- To provide proactive, cost-effective and reliable external/internal customer service to our customers and communities;
- To facilitate and expedite the resolution of local, complex customer issues and problems while maximizing business opportunities;
- To advance Duke Energy's business, environmental, legislative and regulatory initiatives while growing/maintaining our corporate presence in communities;
- To build strategic alliances and sustainable relationships with elected officials, business/community leaders and governmental/legislative contacts;
- To provide a leadership role in working with economic development organizations and existing businesses to attract and retain jobs/investments and to encourage expansion of existing jobs/investments; and
- To serve as a liaison with customers by building meaningful relationships. Collaborate, facilitate and interface regularly with other internal departments to provide key data and information to help achieve operating Company objectives; interfaces with local media contacts.

V.   Practices and Procedures

Departmental personnel maintain close working relationships with all areas of the Company, and work with appropriate Company personnel to assist strategic customers and communities while resolving issues and needs.

VI.   Decision-Making and Control

Departmental decision-making and control are based on department goals and input from other departments. The Department is involved in both proactive and reactive issues and consults frequently with management and expert technical personnel from other departments to determine appropriate responses. Major decisions are reviewed with senior management for input and concurrence. Budget requests and variances are approved by senior management.

VII.   Internal and External Communication

The Department is the communication conduit of the Company for many commercial and industrial customers, local government officials and community-related developments, which need to be interpreted and communicated internally, and for Company positions, which need to be taken.

VIII.   Goal Attainment and Qualification

Annual individual and team goals are set at the beginning of each calendar year and reviewed mid-year and at year-end to determine achievement levels. Evaluations include the level of difficulty and effort exerted to achieve each goal, the achievement level itself, and whether each goals was pursued in a manner, which benefited the Company's image and, which exhibited individual behavioral traits valued by the Company, such as honesty, respect, and high degree of professionalism.
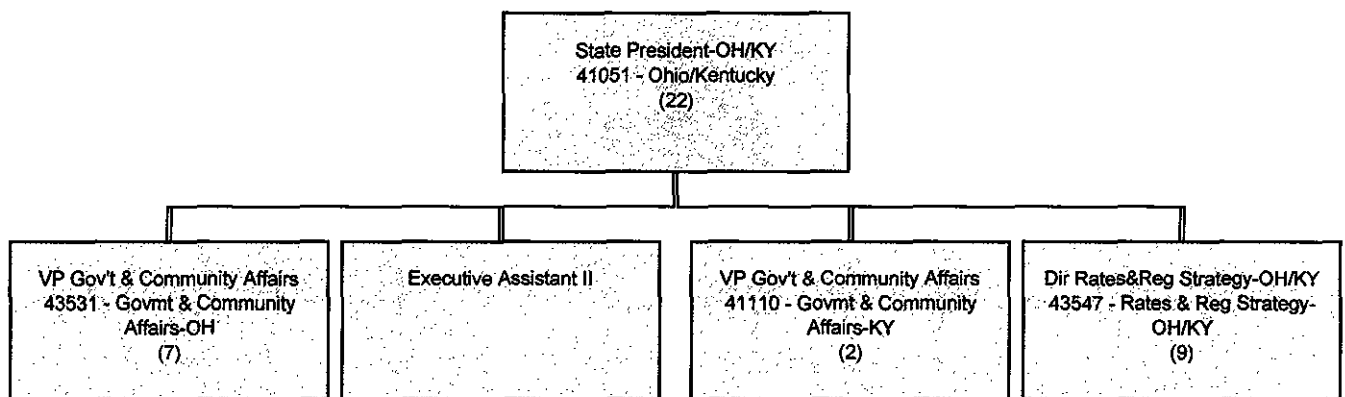
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VP Gov't & Community Affairs	Executive Assistant II	VP Gov't & Community Affairs	Dir Rates&Reg Strategy-OH/KY
43531 - Govmt & Community Affairs-OH		41110 - Govmt & Community Affairs-KY	43547 - Rates & Reg Strategy-OH/KY
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DUKE ENERGY CORPORATION
DUKE ENERGY OHIO, INC.
SUMMARY OF MANAGEMENT POLICIES, PRACTICES AND ORGANIZATION
ECONOMIC DEVELOPMENT DEPARTMENT
SFR Reference: Chapter II (B)(9)(d)(iv, v)

I.   Policy and Goal Setting

The Company's Economic Development group partners with the State of Ohio, Jobs Ohio, local communities, and regional economic development agencies to promote economic growth and sustainable development.

Department policies and approval levels align with corporate policies and objectives. All purchases, expenditures and transactions comply with Duke Energy's Approval of Business Transaction Policy. Compliance with policies, either corporate or departmental, is everyone's responsibility. Compliance is measured in various ways including cost reports for tracking budget performance, schedules track project milestones and performance appraisals measure performance in meeting goals. In addition, it is the responsibility of management at all levels to audit its operation for compliance.

Department goals support Duke Energy Ohio priorities and align with the broad objectives established at the corporate level. Individual and team goals are set annually with input from department employees and other key departments including the marketing support organization. The goal setting process identifies weighted key success factors and measures at the beginning of the year, combines these substantive goals with behavioral goals and corporate financial goals, and includes an evaluation of achievement at the end of the year. Final approval of the goals and policies rests with senior management including the Vice President of Economic Development.

II.   Strategic Planning

Strategic planning within Economic Development is led by the Vice President of Economic Development in collaboration with Market Analytics, Corporate Strategy, Power Delivery, and Governmental and Regulatory Relations. The plan includes evaluation of current regional market conditions and an analysis of where Duke Energy resources can best be leveraged to maximize Duke Energy Ohio assets and improve the economic vitality of the service territory. Planning is approached using the principal that an integrated gas and electric market development effort will result in a more cost effective method of delivering a portfolio of services to customers.

Final plans are reviewed and approved by senior management including the Vice President of Economic Development.

Economic Development Managers determine the activities needed to fulfill their assigned responsibilities and goals, and recommend resource requirements needed to perform these activities. From these recommendations, budgets are developed and submitted to senior management for approval.

Progress in developing and implementing the plans and the results obtained are reviewed quarterly and adjustments are made as necessary.

III. Organizational Structure

Economic Development is headed by the Vice President of Economic Development, who reports to the Senior Vice President of Economic Development for Duke Energy, who in turn reports directly to the Executive Vice President of Energy Solutions.

An organizational chart is attached as Exhibit ED-1.

IV. Responsibilities

The responsibilities of the Economic Development Department are as follows:
- Meet with internal stakeholders such as Business Relations and corporate executives of industries considering expanding or relocating their facilities and help demonstrate the advantages of locating, expanding or remaining in this service area or region;
- Work closely with various chambers of commerce, and regional economic development organizations in designing and executing programs for economic improvement in the region;
- Work closely with various state agencies including Jobs Ohio for economic development in the furtherance of their programs and client assistance;
- Work closely with local communities in the planning, zoning, development of land use, infrastructure development, and other measures targeted to maximize economic development potential;
- Investigate, research and analyze various aspects of industry statistics and demographics in answering questions and concerns of prospective industries;
- Provide prospective customers with information on gas and electric rates and opportunities to obtain the desired service at the most attractive rate;
- Collaboratively work with other state and local economic development agencies to advertise and disseminate information to attract new industry to the region;
- Serve as a point of contact to coordinate service delivery to new companies recruited to the service area.

The responsibilities of the Large Account Managers include:
- Coordinating with the Duke Energy Ohio Economic Development to identify target industries for growth in Ohio;
- Proactively generate growth and expansion leads within the targeted industries;
- Transition qualified leads to Jobs Ohio, their local network partner or the Ohio Development Services Agency for follow-up.

V. Practices and Procedures

Daily activities for Economic Development personnel include:
- Encouraging new companies to locate within the service territory;
- Promoting the region with various economic development community participants including site consultants, developers and real estate professionals;
- Responding to economic development prospect requests;
- Coordinating installation of appropriate gas and electric facilities and delivery of appropriate products and services by the Company in time to meet the customers' needs;
- Serving on state-level policy boards and local economic development in order to influence policy and programs;
- Providing technical assistance to local and regional economic development organizations, chambers of commerce and others; and
- Supporting local economic development organizations with in-kind services such as community profiles, site readiness and other materials.

VI. Decision Making and Control

Departmental decision-making and control within the Department is dependent upon whether a particular decision affects others outside the organization, and the value in terms of resources and impact. Decisions are made at the lowest practical level in the organization and include input from key stakeholders whenever appropriate.

The Department follows all corporate policies regarding the approval of work and expenditures. Through staff meetings, the Department director monitors the overall allocation of resources and performance against annual budgets and goals, and makes decisions within his/her operation. Major decisions are reviewed with senior management for input and concurrence. Budget requests and variances are approved by senior management.

VII. Internal and External Communication

The Economic Development Department is the primary communication conduit between the company and local and regional economic development organizations. External communication channels include direct mail, telephone, e-mail or face-to-face meetings; and may be at the request of the customer or on the Company's

initiative. Department employees also frequently represent the Company and region at industry seminars and conferences, during national and international recruiting visits, and on economic development boards.

Within Economic Development, openness and two-way communications are encouraged between every level. Information regarding projects, progress toward departmental goals and changes to corporate policies and plans are also shared during departmental staff meetings. It is the vice president's responsibility to communicate additions and revisions of corporate policies to employees as appropriate. Corporate information and industry information is available to employees through the employee portal and monthly reports.

VIII. <u>Goal Attainment and Qualification</u>

Individual and team goals are set at the beginning of each calendar year and reviewed mid-year and at year-end to determine achievement levels. Evaluations include the level of difficulty and effort exerted to achieve each goal, the achievement level itself, and whether each goal was pursued in a manner, which benefited the company's image and, which exhibited individual behavioral traits valued by the Company, such as honesty, respect, and a higher degree of professionalism.
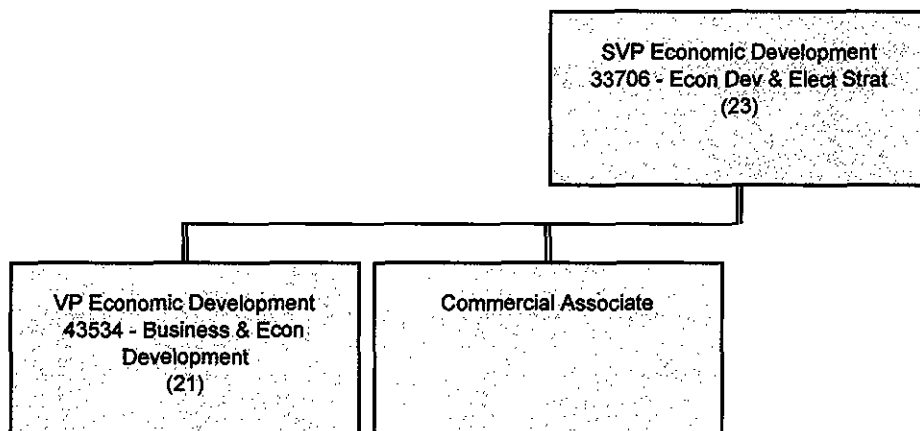
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DUKE ENERGY CORPORATION
DUKE ENERGY OHIO, INC.
SUMMARY OF MANAGEMENT POLICIES, PRACTICES AND ORGANIZATION
OFFICE OF THE GENERAL COUNSEL
SFR Reference: Chapter II(B)(9)(e)(i)

I.   Policy and Goal Setting

The Office of the General Counsel (OGC) does not set Company policy for Duke
Energy. However, it does serve in an advisory capacity to management on pre- and
post-policy establishment, interpretation, and administration and it supports the
corporate policies found in the Code of Business Ethics (CoBE) (Exhibit LD-2). In
addition, the OGC frequently reviews policies for compliance with state and federal
law and agency regulations. Company policies are communicated to OGC
employees in both written and oral fashion and at departmental staff meetings.

Team goals are developed each year through a process that identifies key initiatives
and success factors, weighs them, and combines them with desired individual
performance objectives and corporate financial goals. At the end of each year,
achievements are evaluated and incentives are awarded proportionate to the level of
overall achievement.

Departmental policies and procedures are promulgated by the Chief Legal Officer,
upon the Chief Legal Officer's own initiative or with input and advice from the
attorney staff.

II.   Strategic Planning

Executive management of the Company has the primary responsibility for
establishing the Company's strategic plan. The OGC's primary function with regard
to the strategic plan is to advise management with respect to compliance with state
and federal laws and agency regulations and otherwise to provide material legal
assistance in achieving the strategic plan. In addition, goals and programs are
established within the OGC to support the Company's strategic plan.

III.   Organizational Structure

The OGC is divided into eight functional sections, each headed by an executive with
substantial experience in their respective areas (an executive may head multiple
sections). These sections are: 1) Litigation; 2) Ethics & Compliance; 3) Human
Resources, Labor, & Employment; 4) Corporate; 5) Nuclear, Environmental, and
Health & Safety; 6) State and Federal Regulatory; 7) Commercial Businesses; and 8)
OGC Business Operations. These section heads report directly to the Chief Legal
Officer.

The legal function of the OGC is centralized, with approximately 70 attorneys in the United States providing a range of legal services across the Company. Timekeeping requirements have been implemented in order to allocate time and costs accurately.

The legal function of the OGC includes attorneys, paralegals, contract administrators, legal administrative assistants, contractors, and legal and administrative support personnel. OGC also employs summer law clerks from time to time. All OGC personnel are executive, managerial, supervisory, administrative, or professional employees. The Chief Legal Officer has responsibility for the management and activities of the OGC. The Chief Legal Officer, who is also an officer of Duke Energy, reports directly to the President and Chief Executive Officer of Duke Energy.

An organizational chart is attached hereto as Exhibit LD-1.

IV.   Responsibilities

The legal functions of the OGC are to serve as counsel and provide legal services for the Board of Directors, officers, and employees when they are acting on behalf of the Company during the course of their performance of job-related duties. Such services include, but are not limited to:

- Providing general legal research and advice on matters that may arise in the course of the Company's business;
- Reviewing the legal aspects of Company operations for compliance with federal, state, and local statutes and regulations, including those of the New York Stock Exchange;
- Promptly notifying appropriate personnel of any changes necessitated by administrative or judicial decisions or by the enactment or adoption of new, or revisions to existing, statutes or regulations;
- Developing and implementing preventive programs and written policies of the Company and/or OGC in areas such as antitrust compliance, employment, securities regulation, Sarbanes-Oxley (SOX) compliance, OSHA, and other areas where appropriate;
- Initiating or responding to inquiries regarding review of or recommendations concerning Company policies and procedures;
- Assisting Company officers and personnel in due diligence with respect to, and the preparation, negotiation, and finalization of preliminary and definitive agreements for, mergers and acquisition transactions and joint ventures and other major transactions, as well as assisting in the preparation, negotiation, and finalization of contracts encompassing the various functional areas of the Company's business;

- Assisting Company officers and personnel in protecting valuable intellectual property of the Company;
- Drafting documents and providing legal support for transactions for the Company;
- Reviewing and advising on contractual obligations of the Company; and
- Representing the Company in regulatory and judicial proceedings by acting as counsel or by monitoring and directing outside counsel engaged for such purpose.

Generally, each functional section has specific areas of responsibility, as follows:

1) Litigation Section

Litigation counsel represent the Company in actions involving commercial transactions, personal injury, property damage and, alleged statutory or regulatory violations (except alleged violations under the jurisdiction of the various state utility commissions and the FERC). They are responsible for the disposition of each claim brought against the Company, whether by denial, acknowledgment, settlement or trial, through their personal efforts or by selecting and supervising outside counsel to conduct the case. They coordinate investigative efforts, witness interviews, testimony and exhibit preparation and formulation of strategy in every case. They also train Company personnel in investigative techniques and counsel management and employees involved in claims actions.

Counsel in this section also handle the areas of credit and regulations, with primary responsibility for representing the Company in all credit and collection related matters including bankruptcy cases, and preparation of testimony and exhibits for trial. This section also deals with revenue recovery, theft of energy, and security issues, preparing and overseeing implementation of all security procedures.

2) Ethics & Compliance Section

The Duke Energy Ethics and Compliance (E&C) Program (Program) was established to support the values and policies set forth in Duke Energy's Code of Business Ethics (CoBE), Supplier Code of Conduct (Supplier Code), and the Board of Directors Code of Business Conduct and Ethics (Director Code). The Program is designed to foster a culture of ethical behavior and compliance with the law, and to prevent, detect, and respond to potential violations of laws and regulations that apply to Duke Energy's operations.

Oversight for E&C is provided by the Audit Committee of the Board of Directors. The Chief Ethics and Compliance Officer ("CECO"), who is approved annually by the Board, has the administrative responsibility for the effectiveness of the Program.

Within E&C, there are four teams: 1) Ethics Programs and Training; 2) Corporate Compliance; 3) Reliability Compliance; and 4) Compliance Programs.

Each of these teams is responsible for overseeing the day-to-day operations of the Program to include:

- Establishing key Program elements through the Compliance Program Framework and Standards and supporting implementation of the Compliance Program Framework through training, monitoring and reporting on the Program

- Promoting an appropriate level of ethics and compliance awareness and messaging throughout the organization

- Performing periodic assessments of compliance areas within the Company and reporting to the CECO on the effectiveness of the Program

- Maintaining a list of compliance risk areas and Compliance Area Leads and reviewing the list periodically to ensure it is current and complete

- Receiving periodic reports and updates from compliance risk areas and sharing lessons learned and best practices throughout the Company

- Supporting a system to receive and respond to reports of ethical misconduct and ethics inquiries, including anonymous reports and inquiries, as well as processes to investigate reports of non-compliance

- Chairing and participating in compliance committees (i.e., FERC, NERC, Compliance Council) to engage management and foster a culture of compliance throughout the enterprise

3) Human Resources, Labor, & Employment Section

The Company's Executive Compensation and Employee Benefits attorneys provide legal services to the Company to ensure compliance with applicable laws relating to executive compensation and employee benefits, including advice relating to the design and operation of the Company's retirement and welfare plans and executive compensation programs and the Company's compensation and benefits strategy.

This section also supports the Compensation Committee of the Company's Board of Directors.

Employment and labor law counsel provide legal services to Company management to ensure compliance with federal, state, and local labor and employment laws. They are responsible for preparing necessary documentation, advising management proactively on compliance with labor and employment laws, providing preventive law training, and, when necessary, assisting in the defense of the Company in litigation and administrative proceedings for labor and employment disputes. Employment and labor law counsel also provide primary responsibility for the following functional areas:

- Labor Law, including but not limited to advising Labor Relations and management, representing the Company in labor arbitrations, and before the National Labor Relations Board;
- Employment Law, including but not limited to the Title VII of the 1964 Rights Act, the Fair Labor Standards Act, the Americans with Disabilities Act, the Family Medical Leave Act, the Age Discrimination in Employment Act, the Health Insurance Portability and Accountability Act, the Uniformed Servicepersons Employment and Reemployment Rights Act and similar federal and state laws, as well as representation before the EEOC, Department of Labor, and other such agencies;
- Employment Immigration;
- Workplace Violence and related preventive security matters; and
- Corporate Transactions support through due diligence assistance and documentation preparation relating to labor and employment law matters.

4) Corporate Section

The section head of this section reports directly to the Group Executive and Chief Legal Officer of Duke Energy. The section includes a variety of separate functions.

The Corporate Secretarial group performs corporate secretarial functions on behalf of Duke Energy and its subsidiaries. These functions include coordinating annual meeting of shareholders, assisting in execution of required filing with the New York Stock Exchange, planning and coordinating board meetings, drafting and maintaining board of director meeting minutes, drafting and maintaining board resolutions, maintaining corporate structure charts, and coordinating the naming of officers and directors of Duke Energy and its subsidiaries as well as completing annual filings for each company. The Corporate Secretarial group also assists in execution of

corporate transactions, including entity formation and dissolution, mergers, conversions, and sales.

The Securities, Finance, and Mergers & Acquisitions group provides legal services for the Board of Directors, officers, and employees when they are acting on behalf of the Company during the course of their performance of job-related duties. Such services include, but are not limited to:

- Advice on and compliance with the federal securities laws;
- Advice and assistance with periodic and current reports, proxy statements, information statements, and other SEC filings;
- Support with respect to meetings of shareholders;
- Advice and support with respect to the responsibilities of the Board of Directors;
- Advice on and compliance with the Sarbanes-Oxley Act of 2002;
- Advice on and compliance with the New York Stock Exchange regulations;
- Assistance in financing transactions, including sales of registered and unregistered securities, bank borrowings, issuances of guarantees, lease transactions, and other financing transactions; and
- Legal support for the Treasury, Controller, Corporate Secretary, Investor Relations, Corporate Communications and other Company departments.

Mergers and acquisitions services include coordinating and managing legal services regarding commercial transactions involving mergers, dispositions, acquisitions or other business combinations for Duke Energy.

5) Nuclear, Environmental, and Health & Safety Section

Counsel in the OGC's Nuclear, Environmental, and Health & Safety (EH&S) section provide nuclear advice and EH&S legal services to the entire corporation.

The primary focus of the nuclear generation legal support team is providing nuclear regulatory legal advice to the nuclear sites and oversight and support functions regarding regulatory compliance, licensing, internal and external investigations, rule-making proceeding and legislative proposals. The section is responsible for providing proactive and preventative counseling and training and, as necessary, litigation preparation and representation in adjudicatory proceedings. This section also supports the Nuclear Oversight Committee of the Company's Board of Directors.

Following are some of the areas supported by the Nuclear Generation legal support team:

- Nuclear regulatory matters – including compliance, safety conscious work environment, retaliation and discrimination, license amendment requests, staff and vendor qualifications, security issues, fitness for duty, access authorization, decommissioning and decommissioning funding;
- Nuclear waste and spent fuel issues;
- Nuclear insurance and liability issues; and
- Nuclear development – including siting, licensing, permitting, joint development efforts, document management, discovery, and hearing preparation.

Counsel for environmental matters has responsibility for all environmental-related issues, primarily compliance with the myriad federal and state laws and regulations. Counsel also advises on licensing and the siting of utility facilities. This entails representation of the Company before federal and state agencies and courts, when necessary, filing required documentation and pleadings, and directing outside counsel assisting the Company in these matters.

Counsel in this section also provide advice on laws relating to safety and health, including, but not limited, to advising management on compliance with OSHA and related laws, representing or overseeing the representation of the Company before OSHA, in workers' compensation proceedings, and in court.

6) State and Federal Regulatory Section

This section relates to the Company's regulated operations and utility operating companies. The regulatory counsel represent these utilities before all state and federal regulatory bodies in proceedings determining the rates and tariffs applicable to regulated gas and electric service. Duties in rate cases involve the entire gamut of case preparation and development and of case strategy in conjunction with Rates and Regulatory Accounting Department personnel. This section also functions as trial counsel. Its responsibilities also include territorial matters, customer relations, and demand side management issues. Counsel are also involved in integrated resource planning, regulatory licensing, and permitting of utility facilities, and in the negotiation and review of special contracts. Counsel in this section are also responsible for representing the Company in rulemakings, roundtables, and other policy-setting initiatives of the respective state regulatory agencies and the Federal Energy Regulatory Commission.

Additionally, counsel in this section support gas procurement, including negotiation of contracts with interstate pipeline suppliers and with producers of natural gas, representation of the Company before the Federal Energy Regulatory Commission in proceedings involving pipeline suppliers, and advising senior management on policy development and implementation in accordance with applicable federal and state statutes and regulations.

The continually evolving nature of this area of law requires constant monitoring of all regulatory agencies in the states in which Duke Energy's utility operating companies do business.

7) <u>Commercial Businesses Section</u>

Counsel in the Commercial Businesses section provide legal services to the Company's commercial businesses organizations. These services include contract preparation, negotiation support, contract interpretation, and deal support for proposed and existing transactions.

Counsel for commercial operations have responsibility for all commercial contract and transactional work involving the Company that is not a merger or an acquisition of an entire company (as opposed to individual assets). They are responsible for drafting, reviewing, and negotiating commercial contracts related to all aspects of the company, including construction, engineering services, procurement of coal, gas, nuclear fuel, limestone and lime, rail and barge transportation, software licensing, long- and short-term power purchases or sales, and capital expenditures at the generating stations. In addition, the Commercial Operations group is involved in negotiating agreements to acquire or dispose of Company assets such as acquiring new generation or selling existing generation. They also assist the Company personnel with resolving contract disputes with and nonperformance by third-party suppliers. Finally, they handle all real estate matters for the company, including easements and rights-of-way related to transmission or gas lines and buying and selling real property.

8) <u>Office of General Counsel Business Operations</u>

The Business Operations group provides administrative and operational support to the OGC. Its main functions include, but are not limited to, the following:

- Manage the budget for the OGC;
- Report variances on a monthly basis and conduct related analyses;
- Maintain all financial records;
- Pay and process Outside Counsel invoices for the OGC;

- Maintain relationships with Outside Counsel firms through engagement letters and contracts;
- Manage timekeeping of legal department staff;
- Manage support personnel, including paralegals, administrative assistants, and contract labor;
- Coordinate legal facilities requirements;
- Monitor and ensure department compliance with SOX requirements;
- Manage the planning, acquisition, testing, implementation, maintenance, user training, and support of department technology;
- Manage implementation of performance metrics for Legal department; and
- Provide support to the OGC Budget Committee, Technology Committee and Personnel Committee.

Responsibilities of other functions within the OGC are as follows:

Paralegals

Each of the paralegals has specific assignments within one or more of the functional sections. They are organized geographically and, for administrative purposes, all report to one of three supervisors; however, they are directly responsible to the section head and the attorneys in each section for their substantive workload and for assignment of day-to-day activities. Activities include performing research, both manual and computerized, preparing pleadings and document filings, and tackling any other tasks assigned by the attorneys.

Legal Administrative Assistants

The legal administrative assistants are assigned to two or more attorneys and a paralegal or law clerk. Their activities include, among other things, performing secretarial duties including typing, scheduling, and organizing for the attorneys, paralegals, and law clerks.

Legal and Administrative Support Personnel

The legal and administrative support personnel provide document and administrative support for the Legal Department. Designated individuals also assist with timekeeping, bill processing, budgeting, and computer training for the department.

Contractors

The OGC employs contractors as necessary to address peak workload situations and to help manage permanent employee levels. Contractors can

include, from time to time, auditors, lawyers, paralegals, and administrative support personnel.

V. Practices and Procedures

The Chief Legal Officer maintains responsibility for the assignment of major cases or projects, budgeting and personnel decisions, and the overall management of the department. The Chief Legal Officer is also responsible for giving performance reviews for those staff members under the Chief Legal Officer's direct supervision, and reviewing the appraisals performed by the heads of each of the functional sections.

The attorneys and other employees within each section work independently or in collaboration, as appropriate, on matters assigned to them within their areas of expertise and responsibility. To maintain continuous service to all departments, counsel within each section provide assistance to each other when necessary and all counsel are encouraged to coordinate and work closely with attorneys in other sections, when appropriate. Regularly scheduled meetings between the Chief Legal Officer and the Chief Legal Officer's direct reports are forums for reviewing current projects, resolving issues, addressing administrative support, and updating each other on recent developments and news affecting the department or the Company as a whole. Regular meetings are also held within each section for similar purposes. Other meetings are called when necessary to address particular issues, problems, or concerns, which may then be assigned for study, resolution, or the recommendation of an appropriate course of action.

Access to computerized research databases, such as Lexis and Practical Law, contributes to the productivity of the attorneys. All professional staff members make every effort to keep current with developments in their areas of expertise and responsibility by reading the publications to which the department subscribes, and through participation in seminars and workshops conducted by nationally recognized and accredited organizations and associations. Continuing Legal Education (CLE) requirements are closely monitored, and all attorneys are expected to fulfill all requirements each year.

Outside counsel are carefully selected based upon, among other factors, need, expertise, reputation, cost, and diversity. They are required to provide billing details for scrutiny and are evaluated periodically for performance, cost, and diversity. Invoices for legal counsel procured by OGC are reviewed by members of the Legal Department for accuracy and to validate the level, quality, and efficiency of the work being performed.

VI. Decision-Making and Control

The responsibilities for decision-making rest with the organizational level that has:
- The information to effectively implement the decision;

- The necessary facts to apply sound judgment based on Company policies, procedures, and directives; and
- The authority to take effective action.

The Legal Department acts in an advisory capacity to other departments, but the decision to use inside or outside counsel is made by the Legal Department. If outside counsel is obtained, the Legal Department manages the outside counsel's work.

In addition, the Legal Department manages the Company's activities in judicial and administrative proceedings.

VII. Internal and External Communication

The department maintains open channels of communication for exchange of information and ideas through several media. In addition to regular section head meetings, full staff meetings are held periodically, and periodic meetings are conducted with the administrative staff. In addition, meetings are held as appropriate to communicate to the entire department special issues which cannot be timely addressed in staff meetings.

These methods are designed to disseminate information to all members of the department.

The Legal Department staff participates in interdepartmental meetings and also meets with non-company representatives (entities outside the Company) on an ongoing basis, as necessary. If a legal matter comes to the attention of someone in another department, the Legal Department staff is available to advise on such matters. Communications and legal opinions may be communicated orally or in writing, depending on the particular situation.

VIII. Goal Attainment and Qualification

Due to the individualized and independent nature of attorneys' work, readily quantifiable means of measuring performance are difficult to construct. The effectiveness of the attorneys is reflected in the successful conclusion of an assignment and in the positive feedback from Company departments and outside firms with whom they work.

All attorneys, law clerks, paralegals, secretaries, and other support staff are given performance reviews each year, which indicate individual achievements of the past year and set goals for the following year. Although working in individual capacities, each member of this department strives to assist the department as a whole in its efforts to reach the goals and objectives outlined in Section I above, and to provide the highest quality legal counsel and services to the Company.

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| VP Commercial Legal Support 21911 - Commercial Legal Support (17) | VP, Litigation Legal Support 43463 - Litigation (14) | SVP State&Fed Reg Legal Suppt 14175 - State&Federal Reg Legal Suppt (21) | VP Corporate Legal Support 43354 - Corporate Legal Support (12) |

| VP Nuclear & EHS Legal Support 43356 - Nuclear & EH&S Legal Support (8) | VP HR Legal Support 41153 - HR Legal Supt&Legal Admin Svcs (64) |

CODE OF BUSINESS ETHICS

DUKE ENERGY®

[Ethics]
Matters

Effective October 3, 2016

A MESSAGE FROM OUR CEO

Our purpose at Duke Energy is to power the lives of our customers and vitality of our communities. How we bring that purpose to life matters. We need to accomplish it the right way, under the highest ethical standards using the Code of Business Ethics (CoBE) as a guide.

The CoBE is underpinned by our core values of safety, integrity and service and establishes our ethical obligation. We're committed to earning the trust and confidence of those we interact with every day. To do this, we must be truthful, transparent and genuine in our interactions with each other, our business partners, the communities we serve and the governmental agencies that oversee our business.

When each of us performs our work with the highest personal and professional integrity, we foster an organizational culture of ethical and operational excellence. We must not allow pressure for results to undermine our ethical commitments.

I ask you to speak up if you have a question or observe misconduct. In return, you can expect to be protected from any form of intimidation or retaliation.

Together as a team, we must hold ourselves to the highest standards of honesty and integrity, fulfilling our vision of leading the way to cleaner, smarter energy solutions that our customers value.

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[Ethics Matters]

INTRODUCTION TO THE CODE OF BUSINESS ETHICS

At Duke Energy we're committed to doing the right thing. It's easier to do the right thing when every employee of Duke Energy, its subsidiaries and its affiliates accepts personal responsibility to act ethically and legally when representing the company.

We've set the standard for business conduct in this Code of Business Ethics (CoBE), a document that reflects our core values and sets expectations for our conduct with each other, our customers, investors, public officials, and business partners alike. Since one instance of a person failing to act with integrity can damage the company's hard-earned reputation, every Duke Energy employee must understand and adhere to the expectations in the CoBE. Use this document as a reference guide and contact a member of your management team, your HR business partner, the Ethics Office, or the EthicsLine if you have questions.

Note: This document does not create a contract of employment or alter the at-will nature of any employee's employment in any way.

Our Core Values

Our culture is "the way things get done around here," and it's guided by our core values.

SAFETY

Safety refers to the health and safety of everyone who works here, as well as our communities and the environment.

INTEGRITY

Integrity is acting honestly and ethically, holding ourselves accountable and earning trust.

SERVICE

Service means being agile and innovative in taking care of our customers and helping our communities prosper.

[Ethics] Matters

Our Ethical Commitments

No matter what job we perform, we're each responsible for creating, promoting and maintaining an organizational culture that encourages ethical conduct and compliance with the law. Each of us must understand and comply with the expectations set in the CoBE.

As a Duke Energy employee ...

I WILL ...

- Learn and understand the laws and regulations applicable to my job

- Be honest, transparent, fair and trustworthy in all work-related activities and relationships

- When unclear about what to do, seek advice from my supervisor or another member of my management team, my HR business partner, a member of the Ethics Office, or the EthicsLine

- Report actual or suspected ethical misconduct

- Cooperate with company investigations by providing complete and truthful information and related documentation

- Complete required training and periodic certification of compliance

As a Duke Energy leader ...

I WILL ...

- Be an example for employees by modeling ideal ethical business conduct

- Provide employees with the tools they need to understand and support our core values

- Create an environment where employees feel comfortable discussing ethical issues

- Create and maintain a diverse and inclusive workplace free of harassment

- Promptly respond to requests for guidance and reports of misconduct, engaging investigators and other resources as needed

- Support active investigations by providing timely information and encouraging staff to actively participate

- Administer proper incentives to ensure ongoing compliance and appropriate disciplinary measures if misconduct is substantiated

Making the Right Decision

Even though we generally know the difference between right and wrong, sometimes the issues we face may not be black and white. We may encounter situations with conflicting priorities, such as choosing between a personal gain verses the right decision for the company. Making the right choice can sometimes be difficult, and it takes courage to act on our values, especially when the right choice isn't obvious.

Regardless of the situation, we are all expected to use sound judgment when making a decision on behalf of the company. Consider using this five-step process when facing a challenging decision.

1 STOP Don't be impulsive.

2 TAKE FIVE Think it through for at least 5 minutes.

3 LIST THE FACTS Gain clarity by documenting the facts.

4 USE THE TREE Let the Ethical Decision Tree guide you.

5 GET HELP Ask your supervisor, HR, or call 866.8ETHICS.

[Ethics] Matters

To make a report, contact the EthicsLine:
By phone: **866.8ETHICS** | Online: **ethicsline.duke-energy.com**
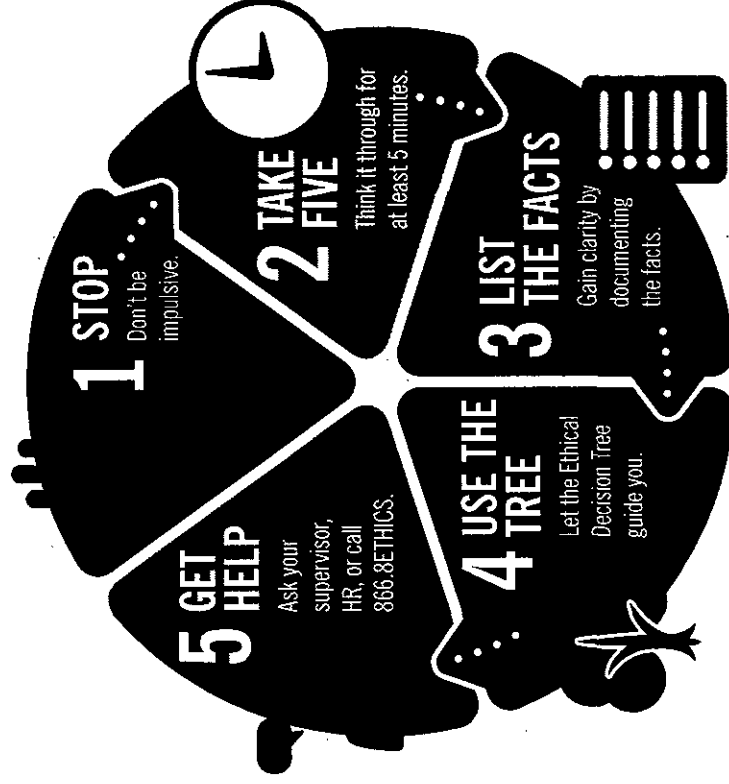
In addition, it is impossible for the CoBE to cover every possible scenario. You may potentially encounter a situation not covered by the CoBE, a regulation or law, or company policy. Employees must accept personal responsibility for exercising appropriate behavior and maintaining high ethical standards. When in doubt, refer to the Ethical Decision Tree for guidance.
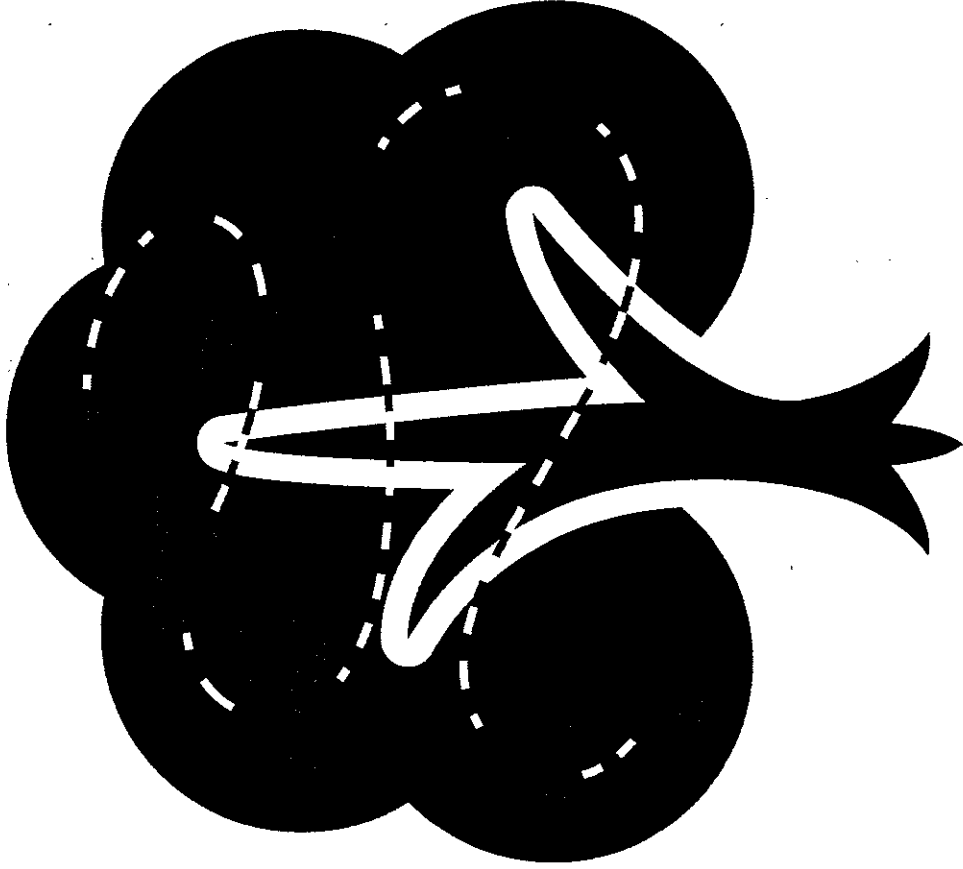
Start at number one and proceed through the questions. If you cannot comfortably answer yes to every question, do not proceed. Instead, seek guidance from your supervisor or another member of your management team, your HR business partner, a member of the Ethics Office, or the EthicsLine.

Seeking a Waiver

Waivers of this Code of Business Ethics will only be granted for exceptional circumstances. Any request for a waiver must be submitted to the Chief Ethics and Compliance Officer, who will gain approval from the Audit Committee of the Board of Directors for any request by the Chairman, the Chief Executive Officer, any officer reporting directly to the Chief Executive Officer, the Controller or the Chief Ethics and Compliance Officer. Any waiver granted to one of these individuals will be disclosed in accordance with Securities Exchange Commission and New York Stock Exchange rules.

Discipline for Non-Compliance

Employees and managers who do not comply with the requirements expressed in the CoBE will face discipline, up to and including termination of employment.

Requesting Guidance and Reporting Concerns

As a Duke Energy employee, you're responsible for reporting actual or suspected violations of the CoBE and for seeking clarification and guidance on ethics, compliance and legal issues. To report an actual or suspected CoBE violation, or to seek guidance, you can contact:

Your supervisor or someone on your management team

Your HR business partner

The Ethics Office at ethicsofficer@duke-energy.com

You can choose to remain anonymous when using the EthicsLine, but it is vitally important for you to keep your report number and PIN in a safe place so you can follow up on your concern or question. We may have follow-up questions about your concern, and you can assist with the investigation by calling or logging back in to the web submission tool to provide additional details. Without all of the facts, it may be difficult for us to get to the bottom of your concern or question.

If you are not comfortable with any of the options above, you can also report a concern:

- Online at **https://ethicsline.duke-energy.com**
- By calling the EthicsLine at **866.8ETHICS** (866.838.4427) in the U.S.
- By mailing a letter to the Ethics Office, P.O. Box 1333, Charlotte, NC 28201

The EthicsLine is a dedicated service maintained by a third-party vendor and is available 24 hours a day, seven days a week. Employees who contact the EthicsLine will be assigned a unique report and personal identification number (PIN) they may use to check on the status of reports and inquiries.

[Ethics] Matters

To make a report, contact the EthicsLine:
By phone: **866.8ETHICS** |Online: ethicsline.duke-energy.com

Investigation Process

CONCERN DOCUMENTED

- Regardless of the way the concern is reported, it will be documented in our case management system.
- The concern will be kept confidential to the extent possible.

INVESTIGATED BY A NEUTRAL PARTY

- Each case is investigated by an independent, neutral and trained subject matter expert.
- Under no circumstances will an investigation be conducted by, or under the supervision of, an individual accused of the activity under investigation, or who has had any involvement in the matter.

INVESTIGATION COMPLETED

- Once the investigation is complete, the report is reviewed to ensure that all of the issues were thoroughly investigated.

ISSUES ADDRESSED

- All substantiated concerns will be addressed through corrective action. Disciplinary action will be taken against an employee if necessary, though in many instances improved procedures can sufficiently resolve a problem.

CASE CLOSED

- The case is closed in the case management system and a summary is communicated to the reporter. If reported anonymously through the EthicsLine, the reporter can use their report number and PIN to call or log back in to the web submission tool to obtain the summary.
- Details related to personnel actions are not shared in accordance with applicable employment laws.

TRENDING & ANALYSIS OF SIMILAR CONCERNS

- Ethics activity is accumulated and evaluated on a regular basis to identify trends that need to be addressed. A summary report is provided to the Audit Committee of the Board of Directors.

In addition, material allegations regarding questionable accounting, internal financial controls (including internal accounting controls) and auditing matters, as well as material allegations involving senior management that could cause Duke Energy significant reputational damage, will receive a special review and be promptly brought to the attention of the Audit Committee of the Board of Directors.

To make a report, contact the EthicsLine:
By phone: **866.8ETHICS** | Online: ethicsline.duke-energy.com

[Ethics Matters]

Good Faith Reporting and Our Policy Against Retaliation

Duke Energy prohibits retaliation against employees who in good faith report concerns to management, Human Resources, the Ethics Office, the EthicsLine or regulatory agencies or who participate in the investigation or resolution of a concern. Good faith does not mean you are right about your concern, but it does mean you honestly believe it to be true. Knowingly making a false accusation is in itself a violation of this Code of Business Ethics.

The company will take appropriate corrective action against employees found to have participated in retaliation, up to and including termination of employment. If you believe you have been retaliated against, please contact the Ethics Office immediately so we may begin an investigation.

What is retaliation?

Retaliation is when a supervisor, manager or a peer takes adverse action against an employee because they spoke up about a concern, whether the concern was reported to a manager, Human Resources, the Ethics Office, the EthicsLine or a regulatory agency.

To make a report, contact the EthicsLine:
By phone: **866.8ETHICS** |Online: **ethicsline.duke-energy.com**

[Ethics]Matters

⚙ BUILDING TRUST WITH EACH OTHER

As a company, we are committed to creating and maintaining an inclusive work environment where the contributions of every individual are recognized, all people are valued and respected and all have opportunities to reach their full potential. We do not tolerate discrimination, harassment or retaliation in the workplace. Simply put, a positive, inclusive spirit drives everything we do.

Equal Employment Opportunity

Duke Energy is an equal opportunity employer and does not discriminate against any employee or applicant for employment based on:

- Race
- Color
- Sex (including pregnancy and related conditions)
- Sexual orientation
- Gender identity or expression
- Religion
- National origin
- Medical condition
- Ancestry
- Ethnicity
- Citizenship
- Age
- Marital status
- Physical or mental disability
- Genetic information
- Military status
- Protected veteran status

As a company, Duke Energy is committed to recruiting, selecting, training and compensating based on merit, experience and other work-related criteria and will develop a diverse candidate pool when recruiting whenever possible. We will not make or act on presumptions about someone that are based on differences protected by law or company policy. Nor will we use any individual differences protected by law or company policy as a factor in any employment decision, or consider a person's complaint regarding unequal treatment when making an employment-related decision. We comply with all applicable federal, state and local laws, regulations and ordinances prohibiting discrimination in places where Duke Energy operates.

Harassment-Free Workplace

Duke Energy is committed to creating and maintaining a culture where every employee can start each day with a sense of purpose and end each day with a sense of accomplishment. You should always be able to perform your assigned duties and responsibilities without being harassed by any other employee, supervisor, manager, contingent worker, customer, vendor or visitor. Duke Energy does not tolerate workplace harassment. You must speak up when workplace conduct makes you or others uncomfortable and promptly report perceived harassment to your supervisor or another member of your management team, your HR business partner, a member of the Ethics Office or the EthicsLine.

Any kind of harassing behavior weakens our culture and will not be tolerated, regardless of whether you are working at a Duke Energy facility or on assignment outside the company (e.g., conferences, storm duty, etc.).

What is harassment?

Harassment is defined as any unwelcome conduct or behavior that singles out an employee because of the employee's race, color, sex (including pregnancy and related conditions), sexual orientation, gender identity or expression, religion, national origin, medical condition, ancestry, ethnicity, citizenship, age, marital status, physical or mental disability, genetic information, military status or protected veteran status.

[Ethics]
Matters

As a Duke Energy employee ...

I WILL ...

- Treat others with respect and dignity any time and any place I represent the company

- Think carefully before making offhand comments or jokes and be sensitive to unintentionally offending others

- Promptly report perceived harassment to my supervisor or another member of my management team, my HR business partner, a member of the Ethics Office, or the EthicsLine

I WILL NOT ...

- Engage in verbal or nonverbal threats, insults, abuse or ridicule (sexual or otherwise) or any other form of bullying or disrespect

- Possess, display or distribute offensive materials in any form such as cartoons, pictures, graffiti, paraphernalia or pornographic materials

- Make offensive remarks or slurs, including inappropriate jokes

- Make or attempt to make intimate, unwelcome or offensive physical contact including blocking normal movements

- Request or demand romantic or sexual favors, explicitly or implicitly, as a condition of employment, promotion, transfer or any other personnel action

Offensive material includes:

- Content that is threatening, unlawful, abusive, harassing, defamatory, libelous, deceptive, fraudulent or invasive of another's privacy, and/or

- Any text, communication, software, image, sound, data or other information that leads to improper conduct (such as involvement with illegal drugs, illegal materials or illegal weapons) or that contains explicit or graphic descriptions or accounts of sexual acts.

Legal Problems Outside of Work

Your conduct away from company property and outside of business hours could negatively affect the company and reflect poorly on your trustworthiness. Off-duty illegal activity may jeopardize workplace safety, the company's reputation or our ability to effectively serve our customers.

The company will assess the effect of any off-duty illegal activity on a case-by-case basis and take appropriate action.

Health and Safety

At Duke Energy, we put safety first in all we do. Our goal is a zero injury and illness safety culture where Duke Energy employees and contingent workers demonstrate personal commitment to continuous safety improvement and to the safety of the communities we serve. Protecting our people enhances the quality of life for our workforce and contributes to our long-term business success.

Each of us must be committed to eliminating occupational health and safety hazards. Only through each employee's participation, ownership and engagement can the company achieve an injury- and illness-free workplace.

We believe in setting clear expectations, providing support and training, and holding employees accountable for understanding and incorporating health and safety responsibilities into daily work activities. We want you to return home safely each day.

As a Duke Energy employee …

I WILL …

- Know, understand and comply with applicable health and safety rules and regulations, including the use of personal protective equipment

- Actively identify hazards, prevent and correct unsafe conditions, and demonstrate safe behaviors at every level

- Seek advice when I am unsure of how to perform a task safely

- Promptly report all health and safety incidents, including near misses, in accordance with department expectations

I WILL NOT …

- Take short cuts that could endanger myself or the well-being of others

- Fail to promptly report or misrepresent the occurrence or severity of a safety incident

Violence-Free Workplace

Duke Energy is committed to providing a safe and secure workplace with a zero tolerance for incidents of workplace violence committed by or against employees, contingent workers, vendors, customers or visitors. Prohibited conduct includes, but is not limited to, threats, physical abuse, stalking, vandalism, arson, or sabotage. Employees must practice safe and respectful behavior on company property and any time they are conducting company business, regardless of the location.

Weapons

Our commitment to a violence-free workplace also includes zero tolerance for the possession of weapons on company property. Employees are prohibited from possessing weapons (including components that could be assembled to become a weapon) in company facilities, in company vehicles, or while conducting company business unless specifically authorized by Enterprise Protective Services.

Employees who violate this requirement will be subject to immediate termination, without progressive corrective action, regardless of the employee's intent.

[Ethics] Matters

We must also be on the lookout for unusual or suspicious behavior, which could indicate a threat of theft, terrorism, commercial espionage or sabotage, or violence. If you witness behavior by a stressed co-worker or someone else you work with that seems erratic or unsafe, you should report it. It is extremely important to understand that these behaviors do not necessarily mean a person will become violent, but they may indicate the person is experiencing high levels of stress or seeks to harm the company.

Always take particular note and seek assistance from Enterprise Protective Services or your HR business partner if:

- You observe a significant change in the behavior patterns of a co-worker or business partner

- The frequency and intensity of the behaviors are disruptive to the work environment

- The person is exhibiting several unusual behaviors

Behaviors that indicate a co-worker may not be effectively managing stress include:

- Excessive absenteeism or lateness
- Disregard for the health and safety of others
- Increased mistakes or errors or unsatisfactory work quality
- Refusal to acknowledge job performance problems
- Faulty decision-making
- Testing the limits to see what they can get away with
- Overreacting to criticism
- Intimidating behavior

Terms to know:

Weapon – any object that is or could be used:

- In a threatening manner, or
- With the intent to inflict bodily harm, or
- To cause deliberate damage to and/or destruction of company property.

Examples of weapons include, but are not limited to:

- Firearms: weapons capable of firing a missile (e.g., gun, pistol or rifle) or using an explosive charge as a propellant
- Explosives and incendiaries: devices, substances or chemicals capable of causing destruction by the act or instance of exploding or burning

Possession – refers to handling a weapon in any manner while on company facilities, in company vehicles, or while conducting company business, unless specifically authorized. For example, "possession" would include removing a lawfully stored weapon from an employee's personal vehicle, or having the item on your person or in your belongings.

Securing Our People, Property and Assets

As a company, we have implemented strict practices to control access to our premises to protect individuals and company assets. These practices are designed to ensure access is based on actual business needs and to minimize any adverse safety or security impact. Our security standards set minimum requirements for preventing, responding to, and recovering from physical incidents.

As a Duke Energy Employee ...

I WILL ...

- Act in a manner that promotes a safe and respectful workplace for all employees

- Report any conduct, behavior or communication that is violent or may lead to workplace violence

- Comply with all applicable laws and regulations regarding the storage, possession and use of firearms and other weapons in personal vehicles while on company property

I WILL NOT ...

- Possess any firearm or other weapon on company property or while engaged in Duke Energy business, unless permitted by applicable law or other company policy

- Harm or threaten others with a firearm or other weapon

- Engage in incidents or threats of workplace violence or intimidation on company property or while conducting company business, regardless of the location

Alcohol and Drug-Free Workplace

We have an obligation to each other to work safely so we can rely on one another to achieve superior results. All Duke Energy employees are expected to report for work and remain at work in a condition free of the effects of alcohol or drugs and be prepared to work together safely to perform our assigned duties. The use of illegal drugs, alcohol, or prescription medications that impacts job performance, corporate reputation, corporate assets, or the safety of workers or the public will not be tolerated.

As a Duke Energy Employee ...

I WILL ...

- Report to work fit for duty and free of the effects of illegal drugs and alcohol

- Report any actual or suspected on-the-job alcohol or illegal drug use

- Cooperate in all drug screening activities required by law or company policy

I WILL NOT ...

- Possess, use, sell, arrange for the sale of, manufacture, dispense or transfer illegal drugs, illegally obtained prescription drugs or alcohol on or off company property while conducting company business

- Consume alcohol on the job, during working hours (including meal breaks) or when on call

- Appear for or return to work in an impaired state

Personal Investment Decisions

As a Duke Energy employee, you are subject to rules that prevent you from making certain kinds of financial transactions. You must be careful when buying or selling securities – even the Duke Energy stock in your retirement account – to make sure you do not make trades when you know about significant decisions or financial results that have not been disclosed to the public. Before trading any stock or other security, you should consider whether you have access to material nonpublic information, about Duke Energy or another company we do business with, which would affect a reasonable investor's decision to make a trade.

As a Duke Energy Employee ...

I WILL ...

- Allow approximately two full trading days after any material nonpublic information of which I am aware has been made available to the public before trading Duke Energy securities

- Contact the Legal Department if I have questions relating to insider trading laws

I WILL NOT ...

- Trade Duke Energy or its business partners' securities if I have access to material nonpublic information

- Provide material nonpublic information to anyone inside or outside Duke Energy who is not authorized to have that information

Conflicts of Interest

As Duke Energy employees, we each have a responsibility to be loyal to the company and avoid actual or perceived conflicts of interest. A conflict of interest occurs when you have to choose between what is in your best interests (financial or otherwise) and what is in the best interest of the company.

The best way to reduce or remove a conflict and avoid a misunderstanding is to disclose any situation that has the potential to be misinterpreted by others, including other employees, customers, suppliers, shareholders and public officials. If you have questions about a conflict of interest situation, talk to your supervisor or call the Ethics Office to determine whether you need to disclose the potential conflict or seek approval from a member of the Executive Leadership Team based on the circumstances.

As a Duke Energy Employee ...

I WILL ...

- Understand and promptly disclose situations where I have an actual or potential conflict of interest

- Act in the best interests of Duke Energy any time I am asked to make a decision on behalf of the company

- Seek approval from a member of the Executive Leadership Team and the Ethics Office for certain employment and business transactions

I WILL NOT ...

- Personally profit from an opportunity available to Duke Energy that I discover using company assets, information or my position at the company

- Personally benefit from a supplier selection or other business decision made on behalf of the company

- Participate in the selection process or oversee the work of a business in which I, or someone I have a close personal relationship with, is employed or has an ownership interest

[Ethics] Matters

While it's impossible to list every scenario, here are some common situations that could create a perceived or actual conflict:

TYPE OF CONFLICT	WHAT IT IS	WHAT IT WOULD LOOK LIKE
Doing business with family and friends	You, a member of your family or anyone with whom you have a close, personal relationship is employed by or owns more than 5 percent interest in an entity that does business with Duke Energy.	Your brother-in-law is hired as a partner in a law firm that you engage to work on Duke Energy matters.

Competing employment	■ You, a member of your family or anyone with whom you have a close, personal relationship:
	  – Is employed by or owns more than 5 percent interest in an entity that competes with Duke Energy.
	  – Takes a position on a board of directors for an organization that does business with Duke Energy.
	■ You have outside employment similar to your current job responsibilities that may interfere with your ability to meet the requirements of your Duke Energy position.
		■ Your son owns a startup renewable energy firm that competes for contracts to operate wind farms in the Southwest.
		■ You are asked to take a position on the board of your local electricity co-op.
		■ You continue to work for your previous employer as a contingent worker doing similar work to your role at Duke Energy.

Outside benefits	You, a member of your family or anyone with whom you have a close, personal relationship receives outside benefits as a result of your position with Duke Energy (such as free or discounted goods or services not available to all employees, access to membership clubs or free use of a vacation property).	■ A general contractor who you hired to do construction work at your Duke Energy work site offers to redo the master bathroom at your house for free, so long as you pay for materials.
Corporate opportunities	You have access to company information that you use for a personal benefit and/or to compete with the company.	■ You are aware of the intentions to build a new facility, so you personally purchase the land with the intent to lease it back to the company.
Personal relationships	You supervise the work of an employee or contingent worker with whom you have a close, personal relationship.	■ Your roommate, a contingent worker who works for a contract company, is assigned to a project under your oversight.

$ BUILDING TRUST AMONG OUR BUSINESS PARTNERS

Duke Energy builds relationships based on trust and respect with our customers, investors, suppliers, public officials and all of our stakeholders. To earn this trust, we conduct business legally and with integrity.

We do not participate in unfair or corrupt business practices and have zero tolerance for bribery. We succeed in the marketplace by offering competitively priced, quality products and services and comply with antitrust and other laws prohibiting activity that reduces competition and restricts trade.

Who We Work With and Why

Our vendors and suppliers are integral to the success of our company, and we choose our partners carefully. Our decision to select a supplier is based on fair and objective criteria, such as technical, commercial, or other valid business reasons. In addition, we expect our suppliers of goods and services to share and adhere to our core values and apply them to the way they do business in the United States and around the world.

Contingent workers, suppliers and vendors are expected to support ethics and compliance programs within their own organizations and adhere to the Supplier Code of Conduct. This expectation includes a prohibition against any kind of child labor, forced labor, physical punishment or abuse. We respect the rights of all humans, and we expect our partners to do the same.

Through our commitment to supplier diversity, we build relationships with small, local, and diverse businesses capable of providing commodities and services at competitive prices. We are committed to building bridges with these businesses by providing equitable opportunities to compete. We believe these efforts can have lasting positive effects on economic development locally, regionally, and nationally. We aim to establish long-lasting "win-win" relationships that create value for all stakeholders.

Bribery and Corruption

We will not engage in any kind of corrupt activity, nor tolerate such activity committed by a third party on our behalf. This means we will not pay, give or offer to provide anything of value in order to illegally influence future business decisions, obtain illegal advantages over other parties, or reward another party for past illegal actions. We comply with U.S. and international anti-corruption laws, including the Foreign Corrupt Practices Act (FCPA). We do not offer or accept bribes, kickbacks, illegal gratuities or similar payments, and we will never punish an employee for refusing to pay a bribe, even if it results in lost business.

In addition, our prohibition against corrupt payments and activities includes bribes, kickbacks, or facilitation payments offered or made to individuals in the private sector or domestic public officials.

As a Duke Energy Employee ...

I WILL ...

- Seek guidance about the laws that apply when visiting or beginning business in a new country or international territory
- Avoid making a facilitation payment, and seek assistance and approval from the Legal Department if such a payment is absolutely necessary
- Conduct appropriate due diligence when engaging a third party to conduct activity on our behalf
- Promptly report any requests for payments, gifts or other improper exchanges to the Ethics Office

I WILL NOT ...

- Offer, promise or authorize anything of value directly or indirectly to a government or foreign official if there is reason to believe the expenditures will be used illegally
- Do business with others who do not share Duke Energy's commitment to corruption-free business practices
- Overlook or ignore red flags that could indicate corrupt activity taken on our behalf by a third party

Terms to know:

Bribe: Anything of value, including money, gifts, services, or favors, given with the intent to persuade someone to act in your favor.

Kickback: A payment made as a reward for facilitating a business agreement or relationship.

Facilitation payment: A payment made to expedite a legally provided service or request.

International Laws

When doing business outside of the U.S., you must know and follow the laws of the country you are working in as well as any U.S. laws that may apply, some of which are listed below.

LAW OR REGULATION	DESCRIPTION
Anti-corruption laws	Legislation in the U.S. and many countries where Duke Energy operates make it a crime to promise, offer or give anything of value to a government official or a political party or candidate in order to obtain or retain business or gain any improper advantage.
Anti-boycott laws	Anti-boycott laws make it illegal to cooperate in any boycotts between foreign countries if the boycotts are not sanctioned by U.S. law.
Treasury embargo sanctions	The Treasury Department's Office of Foreign Assets Control prohibits U.S. companies and their foreign subsidiaries from doing business with certain countries, agencies and individuals. Regulations vary depending on the country and the type of transaction.
Export control restrictions	To prevent sensitive goods, technology and software from falling into the wrong hands, exports of items sensitive to certain countries and individuals may be restricted or prohibited. These restrictions and prohibitions also may apply to transfers between Duke Energy and its foreign subsidiaries.

Because the legal requirements are varied and complex, employees responsible for work outside the U.S. should seek training and ongoing legal advice regarding payments, record keeping and export control restrictions. Contact the Legal Department with questions regarding these and other local laws, regulations and conventions governing international business relationships.

Business Courtesies

Business courtesies are designed to build good will and sound working relationships among business partners, but should never be used to gain special advantage in a relationship. Although a modest exchange may be acceptable under certain conditions, it's never required for doing business with Duke Energy and you must never give or accept business courtesies of any kind that could be reasonably viewed as inappropriately influencing a business decision or creating a business obligation on the part of the recipient.

What's Acceptable

Small or nominal promotional items, gifts and entertainment given in the regular course of business are acceptable. However, care should be taken to not accept business courtesies on a frequent or continual basis. Never accept cash or cash equivalents (gift cards) or discounts not available to all employees. You should also exercise particular caution when negotiating or considering contracts. It is important not to give the impression of any connection between any business courtesy and a business opportunity.

Exchanges with Public Officials

Special rules apply to business courtesies given to political candidates, government-affiliated employees and public officials. If you work directly with public officials you must take extra care to follow laws and company policies covering the acceptable exchange of business courtesies. You should consult with Governmental Affairs before offering a business courtesy to a political candidate, government-affiliated employee or public official. Please refer to the Building Trust with Governments section for more information about interacting with public officials.

Terms to know:

Business Courtesy: Anything of value for which the recipient does not pay fair market value, including gifts, services, travel, accommodations and entertainment.

Public Officials and Government-Affiliated Employees: Employees or representatives (elected or appointed) of:

- Foreign, federal, state and local governments (i.e., executive, legislative or judicial branches)
- Government-owned, sponsored or affiliated companies
- Regulatory commissions
- Other entities with oversight over Duke Energy or any of its affiliates

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As a Duke Energy Employee …

I WILL …

- Offer and accept only business courtesies that are customary, reasonable, legal and of modest value
- Complete a business courtesy log for all courtesies exceeding US$100 value received from a business partner (other than meals), and any courtesy exchanged with a foreign official or union representative
- Obtain documented approval from my supervisor prior to accepting a business courtesy of significant value (greater than US$300 value)
- Seek advice if unsure whether a business courtesy involving a supplier or other business partner is acceptable

I WILL NOT …

- Give or accept any gift, entertainment or other business courtesy that may be perceived by others as an attempt to influence a business decision
- Solicit gifts, favors, travel or entertainment from a supplier or other business partner
- Allow a supplier or other business partner to pay for my overnight travel without prior documented approval from a member of the Executive Leadership Team
- Accept cash, or a cash equivalent such as a gift card, from a supplier or other third party
- Agree to provide payments, contribute to charities, or make political contributions or other payments in return for favorable treatment

Questions to ask yourself:

- Is this exchange infrequent and of modest value?
- Is the exchange customary and a part of normal business practices?
- Would the business courtesy be appropriate to reciprocate in a similar manner at company expense?
- Is the exchange free from any real or perceived special treatment, such as free services or special discounts?
- Will the exchange create a sense of obligation on the giver or recipient?
- Could the courtesy be perceived to inappropriately influence the recipient's business judgment?

Fair Competition

At Duke Energy, we believe in doing business honestly and transparently. We will always participate in the marketplace fairly and lawfully, and we prohibit activities that reduce competition and restrict trade such as agreeing to fix prices, rigging bids, or dividing market territories. We will not engage in any activity that disrespects our competitors, nor will we make inaccurate statements about their products or services or our own.

As a Duke Energy Employee ...

I WILL ...

- Seek advice from the Legal Department before sharing confidential proprietary information with a competitor through an industry association or other means

- Comply with company policies and procedures governing the procurement process

- Report any anticompetitive activity to my supervisor or another member of my management team, my HR business partner, a member of the Ethics Office, or the EthicsLine

I WILL NOT ...

- Enter into agreements with competitors on contract, material, or product pricing, territories, market share or intent to bid (or not bid) for particular business

- Enter into exclusivity agreements with suppliers in markets in which Duke Energy has market power

- Provide inconsistent information about a request for proposal to competing bidders or divulge a quote from one supplier to another supplier

- Take advantage of market power to eliminate or threaten a competitor or potential competitor in that market

- Participate in collusion by any trade association or other industry group regarding membership restrictions, sharing information or desired governmental actions to facilitate coordinated behavior to restrain competition

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Fair competition laws may apply to your job when you are:

- Dealing with competitors

- Participating in industry associations

- Dealing with customers

- Dealing with suppliers

- Collecting competitive information

If your job puts you in any of these situations, you must know and understand what activities may be deemed a violation of antitrust and other laws protecting competition.

In addition, we only gather competitive intelligence through legal and honest means. If a new employee joins Duke Energy from a competitor, we will not ask them to share confidential or sensitive information they learned at their previous employer. We will not resort to any deceptive or manipulative practices nor use any unacceptable sources, including but not limited to:

- Confidential documents

- Documents that were not shared willingly

- Communications not intended for Duke Energy

Intellectual Property

Intellectual property is a creation or innovation used in business. Restricting the use of intellectual property helps the company protect its ideas and brand identity. We all have a responsibility to secure our intellectual property and respect the same of others. We must abide by all laws and regulations related to intellectual property, copyrights, patents, trademarks and trade secrets.

INTELLECTUAL PROPERTY	Denotes the legal rights that may be secured in virtually any creation of the human mind or intellect (for example, an idea, invention, machine, device, process, program, software, drawings, blueprints, name, logo or slogan) or that may be legally protectable (such as a patent, copyright, trademark, service mark and/or trade secret).
COPYRIGHTS	Protect original and tangible works of authorship such as books, brochures, reports, proposals, advertisements and other literary works, as well as works of art, drawings, photographs, videos, maps, charts, musical works, audiotapes and software. Copyrights prevent others from copying the particular fixed expression, but they do not protect the underlying idea.
PATENTS	Protect new and non-obvious inventions, such as machines, apparatus, devices, manufacturing components, chemical compositions, business processes and methods and ornamental designs.
TRADEMARKS AND SERVICE MARKS	Words, phrases, symbols and designs that identify and distinguish the sources of goods or services from those of others.
TRADE SECRETS	Any information used by a business such as formulas, processes, devices, and customer lists that have economic value because they are not generally known or easily discovered by observation or examination, and for which reasonable efforts have been made to maintain secrecy.

As a Duke Energy Employee...

I WILL ...

■ Report any unauthorized use of a Duke Energy copyright, patent, service mark or trademark to my supervisor or another member of my management team, my HR business partner, a member of the Ethics Office, or the EthicsLine

■ Obtain permission to use a third-party's trademark, service mark or other intellectual property

■ Follow the terms of any license agreement allowing the use of a third-party's patented invention

■ Share with the company any intellectual property I create in the performance of my job to ensure adequate protection

I WILL NOT ...

■ Copy or distribute software without first ensuring it is permitted by a licensing agreement

■ Make copies of copyrighted materials without permission or a determination that limited copying is legally permitted

■ Use Duke Energy's copyrights, patents, service marks or trademarks without authorization

BUILDING TRUST WITH OUR COMMUNITIES

Duke Energy proudly serves our communities by protecting our environment, using company assets prudently, safeguarding sensitive information in our possession, and speaking honestly and transparently about our business. We recognize the impact we have on a local, national and global scale, and we regularly work with various stakeholders to improve the quality of life in the communities we serve.

Preserving Our Environment

We are committed to being a good neighbor, which means we respect and honor our role as a steward of our environment. Sustainability is central to everything we do, and responsible management of our natural resources is critical to a cleaner environment, the quality of life in the communities we serve and Duke Energy's long-term business success. We must all demonstrate a personal commitment to protecting the environment.

We strive to be a leader in the transition to cleaner energy solutions, and we are committed to realizing a more efficient and modernized grid to reduce our carbon emissions and other impacts on the environment. Every day we work hard to comply with state and federal regulations in order to protect people and the environment.

Some of the ways we demonstrate our commitment to the environment include:

- Utilizing energy efficiency programs to provide our customers with targeted insights to help them take actions to reduce their energy consumption

- Continuing to invest in clean energy generation and renewable energy sources

- Sponsoring or supporting numerous employee volunteer projects throughout our footprint

- Providing donations of time, money, and resources to local environment-focused nonprofit organizations

- Soliciting feedback and input from a diverse range of customer, community, environmental and business groups

- Selecting business partners based on their shared respect for and commitment to the environment

As a Duke Energy Employee ...

I WILL ...

- Know, understand and comply with applicable environmental rules and regulations

- Support sustainability efforts at my job site and in my community

- Promptly report all incidents or near misses in accordance with department expectations

I WILL NOT ...

- Take short cuts that could knowingly result in damage to our environment or violate environmental procedures

- Misrepresent the occurrence or severity of an environmental incident

- Allow my required trainings or certifications to lapse

Protecting Company Resources

Providing safe, reliable service to our customers and communities is one of our highest priorities, and the resources needed to accomplish this goal are enormous. We must be prudent when spending company money and protect company assets from loss, damage, unauthorized or improper use and waste.

Company resources should always be used responsibly and for legitimate business purposes. However, it is acceptable to use company telephones, computers and other assets for incidental and infrequent personal use so long as you don't abuse the privilege.

[Ethics] Matters

Sensitive Information

The information we gather during business operations is critical to our success and the security of the assets we operate. It is also an essential component of our business value and brand identity. We all have an obligation to guard sensitive information closely and protect it against unintentional disclosure and internal or external threats.

In addition, we are committed to protecting the personal information of our workforce, our customers and our shareholders. We must comply with laws to prevent, detect and respond to the theft or unauthorized use of personal information. Employees with access to sensitive information must protect it from intentional or accidental disclosure. You should carefully restrict physical and electronic access to sensitive information and only share it with others who have an approved business need to know.

Examples of sensitive information include:

Confidential and Proprietary
- Nonpublic operational or financial results
- Customer information
- Unreleased plans or forecasts
- Supplier negotiations, pricing and specifications
- Information regarding financing negotiations
- Formulas, designs and other inventions covered by a patent, copyright or trademark

Personal
- Social Security numbers
- Driver's license, state ID or passport numbers
- Credit card and bank account numbers and personal identification number (PIN) codes
- Protected health information

Company resources include:

- Tools, equipment and machinery
- Information, including sensitive information
- Facilities
- Vehicles
- Office and field supplies
- Cellphones
- Computers and other technology systems
- Work time
- Other assets owned, leased or maintained by the company to conduct company business

As a Duke Energy Employee ...

I WILL ...

- Work all hours reported on time sheets
- Follow applicable procedures when disposing of surplus or obsolete property
- Report actual or suspected theft, damage or unauthorized use of company property

I WILL NOT ...

- Use company resources for my personal benefit in a manner that creates additional costs for the company, interferes with work duties or violates company policy
- Use company property or information for illegal activities or personal gain
- Facilitate or approve a personal loan to or for any Duke Energy executive, officer or board member

As a Duke Energy Employee ...

I WILL ...

- Understand the definition of sensitive information as it applies to my work and take steps to reduce the risk of data loss or exposure and security breaches

- Exercise caution when discussing sensitive information in public areas within and outside the workplace

- Protect network passwords and other security protocols from disclosure

- Promptly report a lost or stolen computer, cellphone or other portable device

- Notify IT of any unusual activity involving information systems and associated resources

I WILL NOT ...

- Disclose sensitive information to co-workers or third parties who are not authorized to receive or have no need to know the information

- Use sensitive information for personal benefit or for the benefit of persons outside of Duke Energy

- Use health information for any purpose other than the administration of health plans or to satisfy regulatory requirements

- Share my network password or other security protocols with others

- Download or install software that has not been approved for company use by IT

The Duke Energy Brand

Our brand and reputation are some of our most valuable assets. The misuse or loss of such assets could have a serious financial impact on the company. We must each take steps to secure the integrity of our brand, and live up to the reputation for excellence it represents.

Communicating with the Public

One way we protect the Duke Energy brand is by releasing company information only through authorized publications and spokespersons.

Unauthorized and inappropriate releases of information to the public can result in violation of full disclosure laws, stakeholder confusion and damage to Duke Energy's competitive position, brand and reputation. We are committed to communicating with the public truthfully, consistently and transparently, and only authorized spokespersons should provide information on behalf of Duke Energy. If you receive a request for comment from the media, contact the Corporate Communications Department.

Social Media

Social media is continually changing the communication landscape and is a great way to learn, find resources, share ideas, gather feedback and test concepts. Employees are encouraged to exchange ideas, viewpoints and best practices via our internal social media platforms. We also support participation in online conversations through external social media tools, so long as it doesn't interfere with your work obligations or violate our internet security policies.

As a rule of thumb, use good judgment and be courteous, professional and respectful of others at all times when using both internal and external social media tools. And as with other forms of communication, make sure you indicate that comments related to the company are your own personal opinion and do not necessarily represent the views of the company, unless you're authorized to speak on the company's behalf.

Discussing or sharing proprietary information, trade secrets or nonpublic information related to the current or future performance of the company on social media is strictly prohibited. Employees should not disclose the personal information of others, including their photograph or likeness, without having first obtained their permission. The posting of false, inaccurate or misleading information regarding Duke Energy and its employees, agents, and contingent workers/contractors is also strictly prohibited.

Tips for using social media

- When talking about Duke Energy, be clear about your association with the company and make sure your statements align with our core values

- Refrain from engaging in negative, disrespectful or harmful conversations

- Remember that social media posts can potentially be seen by the whole world and remain on the internet forever – think before you type

- Do not disclose proprietary, confidential or other types of sensitive information

- If responding to criticism, take the high road and stick to the facts

As a Duke Energy Employee ...

I WILL ...

- Ensure all company documents are created in accordance with existing branding guidelines

- Gain approval before revealing company information to the public to ensure it is not confidential, proprietary, or protected for any other reason

- Communicate honestly and truthfully with the public

I WILL NOT ...

- Represent myself as a spokesperson of the company unless specifically authorized to do so

- Use company letterhead or company email when expressing a personal view in a public forum

- Allow the use of internal or approved external social media sites to interfere with my work duties

- Act in a way that could damage the Duke Energy brand or reputation, both on or off of company time or property

- Use company resources, including internet access, email, instant messaging and cellphones, to access or communicate offensive material

[Ethics] Matters

BUILDING TRUST WITH GOVERNMENTS

In addition to those specifically discussed throughout the CoBE, Duke Energy is subject to numerous complex laws, rules and regulations. Violations of these rules – whether intended or not – can damage the company's operations, financial stability and reputation. That's why you must understand and comply with the letter and the spirit of the laws and regulations relevant to the work you do.

We are also committed to cooperating with the government and abiding by all laws that apply to our interactions with public officials. In addition, we must respond appropriately to any government inquiries or investigations.

Laws and Regulations that Apply to the Company

Each of us contributes to the company's status as a conscientious, law-abiding corporate citizen. We rely on each other to ensure we meet the many legal and regulatory requirements imposed by the various regulatory agencies that govern our industry and protect the public interest. Core compliance practices based on a common set of tools and concepts are deployed across the business to prevent, detect and respond to potential violations of laws and regulations that apply to Duke Energy's operations. Individually, we are responsible for understanding the laws and regulations applicable to our jobs and the consequences of our actions. Intentional non-compliance is never an acceptable option.

Key regulatory compliance areas include:

FERC Compliance

The Federal Energy Regulatory Commission (FERC) is responsible for regulating the interstate transmission of electricity, natural gas and oil, as well as wholesale sales of electricity in interstate commerce. Under the Federal Power Act, the FERC is authorized to issue regulations regarding wholesale sales of electricity and transmission and to enforce those regulations and laws. We maintain a comprehensive FERC compliance program to ensure we meet our obligations, including but not limited to:

- Affiliate Restrictions that govern the relationship between a regulated utility with captive customers and its market-regulated power sales affiliates.

- Standards of Conduct that govern the relationship between regulated transmission providers and their workers performing marketing functions.

NERC Compliance

The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority, subject to oversight by the FERC, whose mission is to assure the reliability of the bulk power system in North America. NERC develops and enforces Reliability Standards, annually assesses seasonal and long-term reliability, monitors the bulk power system through system awareness, and educates, trains, and certifies industry personnel. Our NERC compliance program includes oversight of our obligations related to Critical Infrastructure Protection (CIP) and Operations and Planning (O&P) standards to formalize grid operations and ensure the security of physical and cyber assets essential to the reliable operation of the electric grid.

PHMSA Compliance

The Department of Transportation's (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA), acting through the Office of Pipeline Safety (OPS), administers the department's national regulatory program to assure the safe transportation of natural gas, petroleum, and other hazardous materials by pipeline and develops regulations and other approaches to risk management to assure safety in design, construction, testing, operation, maintenance, and

emergency response of pipeline facilities. Our natural gas compliance program provides oversight of our obligations related to federal and state regulations to ensure we deliver safe and reliable natural gas to our customers.

Public Utility Commission Compliance

We comply with all state utility commission orders and regulations in the jurisdictions in which we operate to ensure fair consideration in the interest of the public through cost-effective rates, appropriate affiliate relationships, and future planning for safe, cost-effective and reliable service.

Participating in the Political Process

Duke Energy strongly supports individual participation in the political process, including involvement with political parties, candidates and issues. We respect the right of individual employees to disagree with a company political position. If you choose to participate in political activities as an individual, you must use your own time and resources and not the company's.

As a Duke Energy Employee ...

I WILL ...

- Clearly identify individual, personal political views as such and not those of Duke Energy

- Get approval from Government Affairs before using company funds or resources to contribute directly or indirectly to a public official, or to sponsor an event where a public official is an attendee, invitee, speaker or honoree

- Notify my supervisor and Government Affairs before making plans to campaign or serve in public office

- Excuse myself from decisions involving Duke Energy while serving as a public official

I WILL NOT ...

- Use company funds to provide a contribution, gift, meal, travel, entertainment or event ticket to a public official or his/her staff without approval from Government Affairs

- Contact government personnel to influence legislation, rule-making or policy on behalf of Duke Energy without involving Government Affairs

- Request company reimbursement for time spent supporting political candidates and issues or for personal political contributions

- Apply direct or indirect pressure on a co-worker to make a personal political contribution

[Ethics] Matters

Interacting with Public Officials

As a company, Duke Energy regularly interacts with public officials responsible for laws, regulations, rules and policies that affect our company. Public officials are considered any government employees and representatives, including elected or appointed officials in foreign, federal, state and local governments, regulatory commissions and other oversight agencies. We must ensure that our interactions and relationships with public officials are professional and productive and comply with all related laws, orders, regulations and rules.

Doing Business with the Government

When doing business with the government, it is important to remember that what is acceptable for other private sector partners may not be appropriate with government employees. For example, we may be prohibited from providing any type of courtesy, including meals and drinks, to certain government officials. Also, government contracts are subject to extensive regulations, so make sure you are aware of applicable rules prior to engaging in government bids or contracts. As with all other customers, be sure you conduct business with integrity and communicate honestly. You may also refer to the Building Trust with Business Partners section for information about business courtesies.

As a Duke Energy Employee ...

I WILL ...

- Notify Government Affairs prior to interacting with public officials if that is not part of my assigned responsibilities

- Abide by applicable ex parte rules when communicating with public officials

- Communicate with public officials in a courteous, professional and business-like manner

- Follow rules that apply to business courtesies given to public officials

I WILL NOT ...

- Create or contribute to any situation where the responsibilities, judgment or objectivity of a public official becomes compromised

- Discuss potential company employment with a public official without first consulting with Human Resources

- Offer, promise or give anything of value to a public official to assist me or the company in obtaining or retaining business or to obtain any improper advantage

What is an ex parte communication?

An ex parte communication is any oral or written communication that is not on the record, for any pending proceeding, where reasonable notice to all parties was not given. Ex parte communication is generally prohibited; however, communication regarding undisputed administrative or procedural matters and educational or informational communications when there are no other parties to the proceeding other than Duke Energy may be exempt from ex parte rules. When in doubt, contact the Legal Department prior to engaging in the communication.

Accurate Reporting and Records

Every one of us, regardless of our position, has an obligation to make sure that the information we contribute to the company's operational, financial and other business records is complete, factual and timely. Whenever you create a record, make sure you include all required information and that the information is accurate.

We must also retain our business records in accordance with all laws, regulations, and company policies.

What is a record?

A record is any information that has an ongoing value, such as something that documents a business decision or transaction and who participated, provides evidence of regulatory requirements or obligations, supports the ongoing operations of the business, or provides evidence of corporate history. Examples include:

- Timekeeping records
- Expense reports
- Inventory records
- Environmental reports
- Health and safety reports
- Quality assurance certifications

As a Duke Energy Employee ...

I WILL ...

- Adhere to proper practices related to the creation, disclosure, retention and destruction of business records
- Actively manage records and other information compiled in any media type, including paper and electronically stored information
- Follow records retention guidance and direction provided by company attorneys in the event of pending or anticipated litigation or regulatory inquiry

I WILL NOT ...

- Retain records beyond the period defined in the applicable records retention schedule unless directed to do so by a company attorney
- Destroy, alter or falsify records or other materials after being notified by a company attorney that they should be preserved

Fraud Prevention

Employees who intentionally misrepresent or conceal facts regarding our business or who assist others in doing so have engaged in fraud. Fraud compromises the integrity of our financial reporting and the safety of our assets. If you are aware of or suspect fraud, you must report it immediately to your supervisor or another member of your management team, your HR business partner, a member of the Ethics Office, or the EthicsLine.

As a Duke Energy Employee ...

I WILL ...

- Maintain books, accounts and records according to applicable legal and regulatory requirements, including Generally Accepted Accounting Principles (GAAP) requirements for financial records

- Record financial transactions and other business activity accurately and promptly, including time entry reporting

- Provide complete and accurate documentation of reimbursable expenses

- Provide complete and accurate information and related documentation during company investigations

- Report actual or suspected fraud immediately

I WILL NOT ...

- Conceal or otherwise fail to disclose to management material financial or nonfinancial information that could impact the company's external reports and other communications

- Falsify personal credentials, documents or certifications required by company procedures and/or regulatory authorities, including providing my signature as a quality assurance check without completing the inspection process

- Manipulate financial or operational results to meet targets or goals

- Maintain off-the-books accounts for any reason, including to facilitate questionable or illegal payments

- Separate a single transaction into multiple transactions to circumvent delegation of authority

What are some examples of fraud?

Fraudulent financial reporting

- Intentional reporting of false expense or revenue data that improperly states amounts reported on publicly filed financial statements

- Intentional misstatement of price data reported for price index purposes

- Intentional misapplication of accounting principles relating to amounts, classification, accrual, manner of presentation or disclosure

Misappropriation of assets

- Intentionally submitting an inaccurate expense report for personal expenses

- Excessive personal use of company supplies or assets

- Improper time reporting with intent to defraud

Corruption and other fraud-related misconduct

- Overriding existing controls, rendering the controls ineffective

- Falsifying personal credentials

- Tampering with documents

[Ethics]
Matters

Responding to Requests for Information

We are committed to providing complete, accurate, and truthful information when responding to requests for information because it's good for business and it's the right thing to do. For example, audits of our operations and financial accounts and records ensure we are meeting our legal obligations, accounting for our finances in accordance with Generally Accepted Accounting Principles, and accurately reporting our financial standing to regulators, shareholders, and the general public. We must all cooperate during an audit and provide accurate information in accordance with our policies.

Various government agencies or entities may also request Duke Energy information and documents. Such requests may stem from a regulatory action, government investigation or litigation. The requests may be informal or may be presented by subpoena, search warrant or civil discovery documents. An understanding of the issues these requests raise and the immediate involvement of appropriate Duke Energy professionals are necessary in order to comply with the law, to secure appropriate protection of Duke Energy's rights and the rights of its employees, and to deliver accurate and consistent responses to these requests. If you receive such a request, contact the Legal Department immediately.

[Ethics]
Matters

DUKE ENERGY CORPORATION
DUKE ENERGY OHIO, INC.
SUMMARY OF MANAGEMENT POLICIES, PRACTICES AND ORGANIZATION
INTERNAL AUDIT SERVICES
SFR Reference: Chapter II(B)(9)(b)(vi)

I.   Policy and Goal Setting

The Company has an internal audit function (Corporate Audit Services) with approximately 49 in-house personnel. Corporate Audit Services engages external professional services firms for expertise and supplemental resources, as required.

Corporate Audit Services' policies and goals are outlined in the Company's Corporate Audit Services Charter and Policy (Policy) - Exhibit IA-2. The overall goal of Corporate Audit Services, as outlined in the Policy, is to provide an independent, objective assessment of the Company's activities and internal control structure to all levels of management and the Audit Committee of the Board of Directors.

II.   Strategic Planning

Corporate Audit Services conducts a risk planning process to create an annual audit plan – Exhibit IA-3. Input into the audit plan includes collaboration with Global Risk Management, interviews with management, Company initiatives, systems and process changes, and industry trends and developments. The plan is updated, as required, based on developments within the Company. The audit plan is formally approved by the Audit Committee of the Board of Directors.

III. Organizational Structure

Corporate Audit Services is led by the Vice President-Corporate Audit Services, who reports functionally to the Audit Committee and administratively to the Chief Financial Officer. Directors and managers reporting to the Vice President are generally aligned with individual business units or corporate areas; however, staff persons are pooled and are not aligned to individual business units or corporate areas.

The Audit Committee reviews the experience and qualifications of Corporate Audit Services' personnel annually.

An organization chart for Corporate Audit Services is presented as Exhibit IA-1.

IV. Responsibilities

The objective of the Corporate Audit Services Department is to determine whether the organization's network of risk management, control, and governance processes, as designed and represented by management, is adequate and functioning properly. To accomplish this objective, the Corporate Audit Services Department will:

- Examine and evaluate the adequacy of design, documentation, and effectiveness of the system of internal control throughout Duke Energy and the quality of performance in carrying out assigned control responsibilities.
- Assist management in the assessment of business risks and in the identification of cost beneficial modifications of internal controls to mitigate risks, including potential fraud, to acceptable levels.
- Assist management in providing reasonable assurance that Duke Energy's objectives and goals will be met efficiently and economically.
- Interact with various Duke Energy governance groups as required.
- Evaluate the means of safeguarding assets and, as appropriate, verify their existence.
- Review compliance with established laws, regulations, and policies and procedures, as appropriate.
- Conduct selected special audits and consulting projects at the request of management, as appropriate, or the Audit Committee.
- Communicate opportunities for improving management control, profitability, and the organization's image to the appropriate level of management and to the Audit Committee.
- Follow-up on outstanding audit matters and significant deficiencies / material weaknesses to validate that these issues are being resolved appropriately and timely.

The specific responsibilities of the Corporate Audit Services Department are to:

- Develop an annual audit plan using an appropriate risk-based methodology, incorporating significant risks or control concerns identified by management, and communicate the plan to the Audit Committee. This plan may be modified, as appropriate, for changing or emerging business risks or issues. Modifications that significantly alter the nature of collective audit and risk coverage provided under the plan must be reviewed and approved by the Audit Committee.
- Implement the annual audit plan, as approved, including any requested special audits or projects as appropriate.
- Maintain a professional audit staff with sufficient knowledge, skills, experience, and relevant professional certifications to perform its responsibilities.
- Work collaboratively with the Company's external auditors to ensure appropriate risk coverage.
- Report the results of its work to management in a timely manner.

- Assist in the investigation of significant suspected fraudulent activities within the organization and report the results to management and the Audit Committee.
- Maintain and administer a rigorous follow-up process to ensure that committed management actions to address audit issues are properly and timely executed or that Senior Management has accepted the risk of not taking action.
- Perform their work in conformance with the Code of Ethics, the definition of internal audit, and Standards for the Professional Practice of Internal Auditing of the Institute of Internal Auditors.
- Discharge these responsibilities in a manner consistent with the purpose and objectives set forth in the Corporate Audit Services policy, with the Duke Energy Code of Business Ethics, and the Duke Energy culture.

In accordance with the Policy, Corporate Audit Services will not perform any activities that conflict with the internal audit function's authorized responsibilities or impair the function's independence and objectivity.

V.   Practices and Procedures

Corporate Audit Services executes its audits and other reviews of financial, compliance, operational, information technology, and environmental, health, and safety management system areas using its methodology that prescribes guidelines for audit planning, execution, reporting, and follow-up.

Corporate Audit Services also performs Design Effectiveness Reviews (DERs) of certain projects to identify and address key control issues prior to implementation. Guidelines for DERs have also been established.

VI.   Decision-Making and Control

Roles and responsibilities with regard to audit projects are defined by Corporate Audit Services' methodology. Generally, the manager provides overall management for the audit projects, including audit scope, objectives, issue resolution, and communications (including reporting). The in-charge auditor and other team members support the manager throughout the project. Audit reports are reviewed and approved by the appropriate manager, director, and Vice President.

As noted above, the Audit Committee reviews and approves the annual audit plan and receives periodic updates on the audit plan status, significant audit conditions, progress on the remediation of significant open conditions, and the overall Corporate Audit Services' performance (annually).

Administrative matters are addressed by the Vice President, in conjunction with the Chief Financial Officer (administrative report) and the Vice President's leadership team, as appropriate.

VII. Internal and External Communication

Corporate Audit Services personnel, in the performance of their duties and responsibilities, interface frequently with personnel within the Company.

Corporate Audit Services reports the results of its audits and other projects using standard templates or memoranda (depending upon the nature of the project). The reports include the conditions and their prioritization, management responses, and planned remediation dates. The reports are addressed to the appropriate process owners, and the report distribution includes management of the process owners, the Corporate Controller and certain members of the Controller's leadership team, the Chief Information Officer (if IT-related), the Senior Vice President-Environmental, Health & Safety (if EHS-related), and other Company leadership as necessary. An Executive Summary of audit reports issued, including links to the reports themselves is provided to the Chief Executive Officer and direct reports periodically.

Corporate Audit Services provides periodic updates to the Audit Committee as noted above.

VIII. Goal Attainment and Qualification

Performance is measured by the successful completion of the annual audit plan (amended as required), by the timely resolution of open audit conditions, and the results of management surveys that gauge overall performance. Corporate Audit Services may also periodically review timeliness of report issuance and departmental financial results as performance indicators.

Corporate Audit Services Org Chart

Vice President
Corporate Audit Services

Executive Assistant

Director
Corporate/Commercial Business

Director
Regulated Business

Director
IT

Audit Manager

Audit Manager

Audit Manager

IT Audit Manager

IT Audit Manager
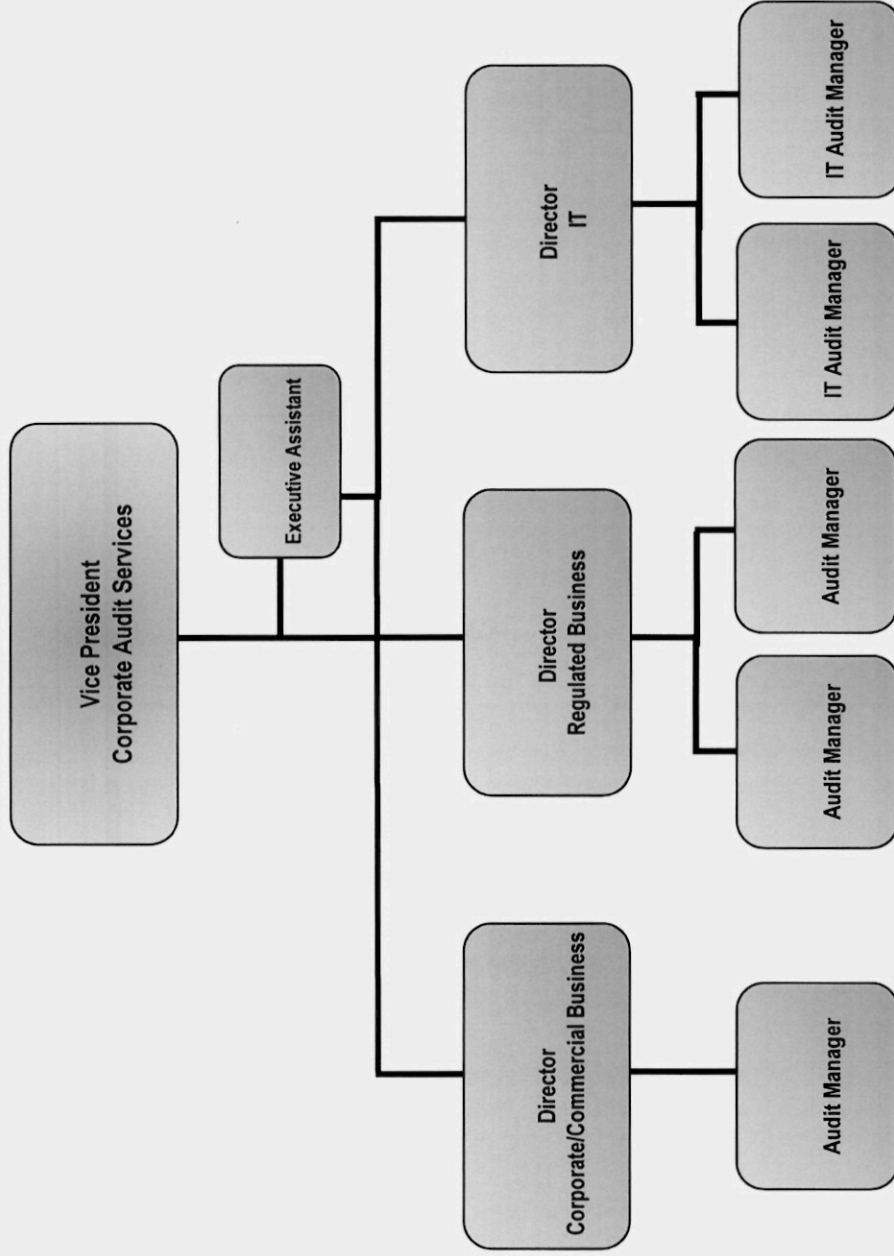
Staff Pool
37 Employees

Audit Policy

Applicability:	Applies to Enterprise
Originator:	Corporate Audit Services
Approval:	Chief Financial Officer: Audit Committee

Effective Date:	1/1/16
Revision Date:	2/24/16
Reissue Date:	04/04/2006

Vision

Duke Energy's Corporate Audit Services Department delivers world-class internal audit services that enable Duke Energy to achieve superior performance. In conjunction with the delivery of these services, Corporate Audit Services will:

— Champion Strong Controls and Governance
— Drive Effective Risk Management
— Enhance Operational Efficiency
— Foster Compliance
— Facilitate Constructive Change
— Develop Duke Energy Leaders

Statement of Purpose and Philosophy

It is the policy of Duke Energy, including its subsidiary business units and affiliates, to provide and support a strong internal audit department as an independent assurance function for the purpose of advising and assisting all levels of management and the Audit Committee of the Board of Directors with objective evaluations, appraisals, and recommendations concerning the organization's activities and internal control structure.

Duke Energy management, including the Board of Directors and the Audit Committee of the Board of Directors, supports and expects a capable and independent internal audit function. This is part of Duke Energy's strong commitment to an effective internal control environment and related risk assessment structure and represents the tone at the top that is critical to effective governance and internal controls.

Policy Expectations

The objective of the Corporate Audit Services Department is to determine whether the organization's network of risk management, control, and governance processes, as designed and represented by management, is adequate and functioning properly. To accomplish this objective, the Corporate Audit Services Department will:

- Examine and evaluate the adequacy of the design, documentation, and effectiveness of the internal control system, as defined below, throughout Duke Energy, including its subsidiary business units and

affiliates, and the quality of performance in carrying out assigned control responsibilities
- Assist management in the assessment of business risks and in the identification of cost beneficial modifications of internal controls to mitigate risks, including potential fraud, to acceptable levels
- Assist management in providing reasonable assurance that Duke Energy's objectives and goals will be met efficiently and economically
- Interact with various Duke Energy governance groups as required
- Evaluate the means of safeguarding assets and, as appropriate, verify their existence
- Review compliance with established laws, regulations, and policies and procedures, as appropriate
- Conduct selected special audits and consulting projects at the request of management, as appropriate, or the Audit Committee
- Communicate opportunities for improving management control, profitability, and the organization's image to the appropriate level of management and to the Audit Committee
- Follow-up on outstanding audit matters and significant deficiencies/material weaknesses to validate that these issues are being resolved appropriately and timely

Duke Energy has adopted the Committee of Sponsoring Organizations (COSO) framework of internal control. Internal control is a process affected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives ("control objectives") in the following categories:

- Effectiveness and efficiency of operations
- Reliability of financial reporting
- Compliance with applicable laws and regulations

Corporate Audit Services assesses risk and controls in accordance with the COSO framework.

Accountability: Roles and Responsibilities

The Corporate Audit Services Department must maintain independence and objectivity in their work. In order to maintain this independence, the Corporate Audit Services Department reports functionally to the Audit Committee of the Board of Directors and administratively to the Chief Financial Officer. This reporting relationship is designed to provide sufficient authority to promote independence and to ensure broad audit coverage, adequate consideration of audit reports, and appropriate action regarding audit observations.

With respect to audit matters, the Corporate Audit Services Department is authorized to:

- Have full and unrestricted access to all Duke Energy (including subsidiary business units and affiliates) functions, records, property, and personnel, and may make direct contact with any level of management
- Communicate directly with the Audit Committee, as needed
- Allocate resources, set frequencies, select subjects, determine scope of work, and apply the techniques required to accomplish audit objectives
- Obtain the necessary assistance of personnel in units of the organization where audits are performed, as well as other specialized services from within or outside the organization

The Corporate Audit Services Department will not perform any activities that conflict with the internal audit function's authorized responsibilities or impair the function's independence and objectivity.

The responsibilities of the Corporate Audit Services Department are to:

- Develop an annual audit plan using an appropriate risk-based methodology, incorporating significant risks or control concerns identified by management, and communicate the plan to the Audit Committee. This plan may be modified, as appropriate, for changing or emerging business risks or issues. Modifications that significantly alter the nature of collective audit and risk coverage provided under the plan must be reviewed and approved by the Audit Committee.
- Implement the annual audit plan, as approved, including any requested special audits or projects as appropriate
- Provide consulting services to assist organizational efforts related to governance, risk management, controls, and process change
- Maintain a professional audit staff with sufficient knowledge, skills, experience, and relevant professional certifications to perform its responsibilities
- Work collaboratively with the Company's external auditors to ensure appropriate risk coverage
- Report the results of its work to management in a timely manner
- Assist in the investigation of significant suspected fraudulent activities within the organization and report the results to management and the Audit Committee
- Maintain and administer a rigorous follow-up process to ensure that committed management actions to address audit issues are properly and timely executed or that Senior Management has accepted the risk of not taking action
- Perform their work in conformance with the Code of Ethics, the definition of internal audit, and Standards for the Professional Practice of Internal Auditing of the Institute of Internal Auditors
- Discharge these responsibilities in a manner consistent with the purpose and objectives set forth in this policy, with the Duke Energy Code of Business Ethics, and the Duke Energy culture

The responsibilities of business unit or functional area management are to:

- Establish and maintain a strong and effective system of internal controls consistent with the COSO framework, including an appropriate tone at the top
- Develop and execute appropriate timely action plans to address issues or risk exposures communicated by Corporate Audit Services
- Provide full and unrestricted access to all Duke Energy (including subsidiary business units and affiliates) functions, records, property, and personnel
- Provide any necessary assistance or resources to Corporate Audit Services personnel to facilitate the execution of their responsibilities

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Review and Approval of 2017 Audit Plan

Jeff Stone

Vice President, Corporate Audit Services

Audit Committee
December 14, 2016

Agenda

- Three lines of defense model

- Audit hour allocation

- Audit hour breakdown by organization

- 2017 audit plan highlights

- Proposed 2017 audit plan

- Appendices

  – Annual audit planning process overview

  – Compliance-related audits

  – Audit hour coverage trend

  – Risk oversight and governance at Duke Energy

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Three lines of defense model

Lines of defense represent areas providing key risk mitigation, which are considered when developing the annual audit plan

Board/Audit Committee

Senior Management

Risks

1st Line of Defense

Management Controls

2nd Line of Defense*

Enterprise Risk Management

SOX Administration

Environmental Health and Safety (EHS)

Ethics and Compliance

Others

3rd Line of Defense

Corporate Audit Services

*For additional detail, see Appendix D.

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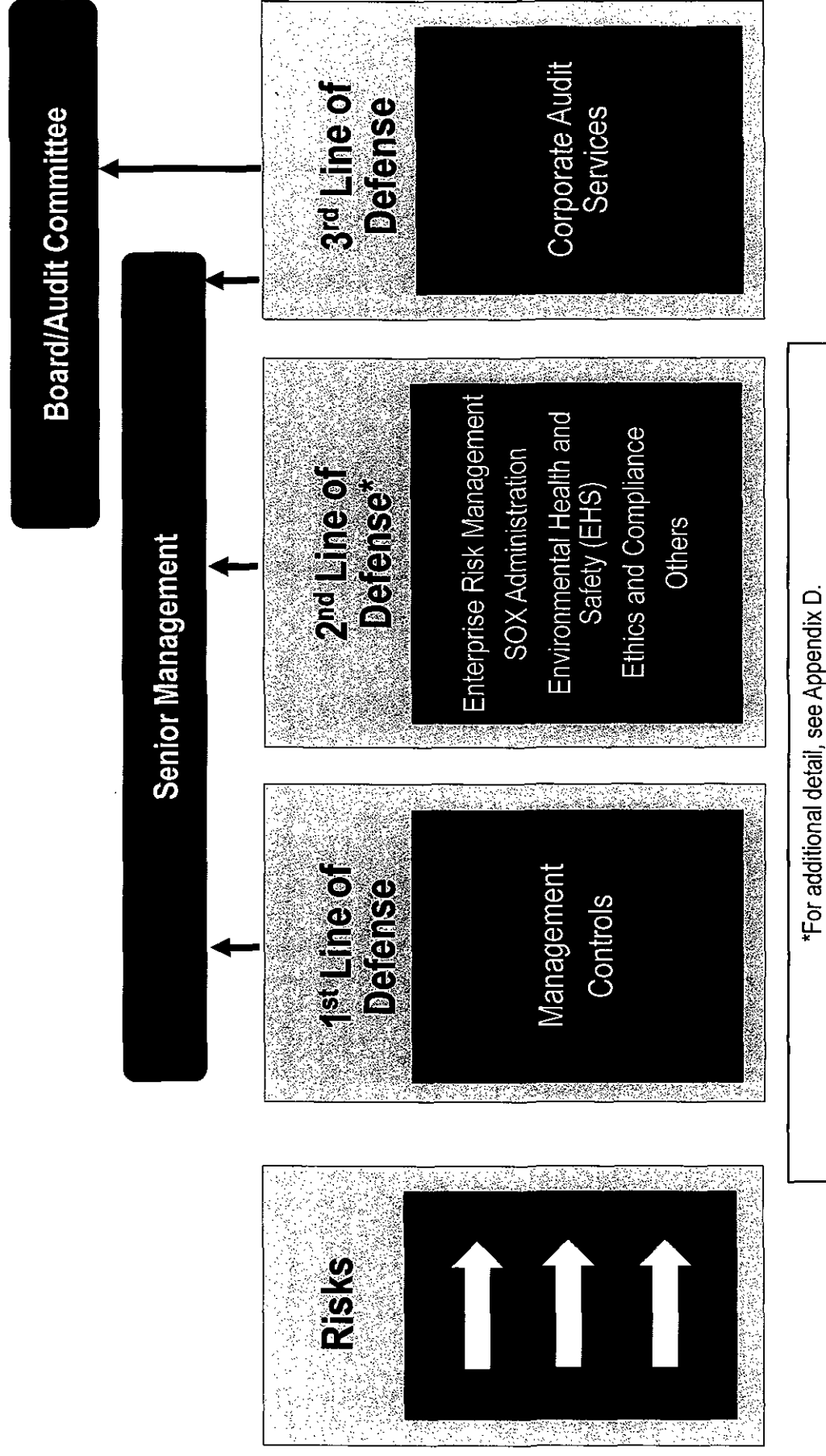
Audit hour (and number) allocation

■ Operational ■ Financial/Compliance ■ IT ■ EHS ■ PNG*

2017
63,000
(83)
45,900
(49)

2016
68,000
(77)
17,100
(29)

2015
71,050
(87)
19,600
(27)

Annual Trends:
2016 – 2017:
- Reduction in safety audits
- Increased cyber security audits
- Sale of Duke Energy International
- Data analytics and efficiency opportunities identified

2015 – 2016:
- Nuclear merger integration complete
- Productivity improvements
- Focus on cyber security, EHS, and compliance
- Operational – fewer audits but expanded/ enterprise-wide scopes

*Includes approximately 1,800 hours of Piedmont Natural Gas (PNG) SOX testing each year

Audit plan as proposed provides adequate risk mitigation coverage. See Appendix C.

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4 | December 14, 2016 AC

Audit hour breakdown by organization

Legend:
- 2017*
- 2016
- 2015
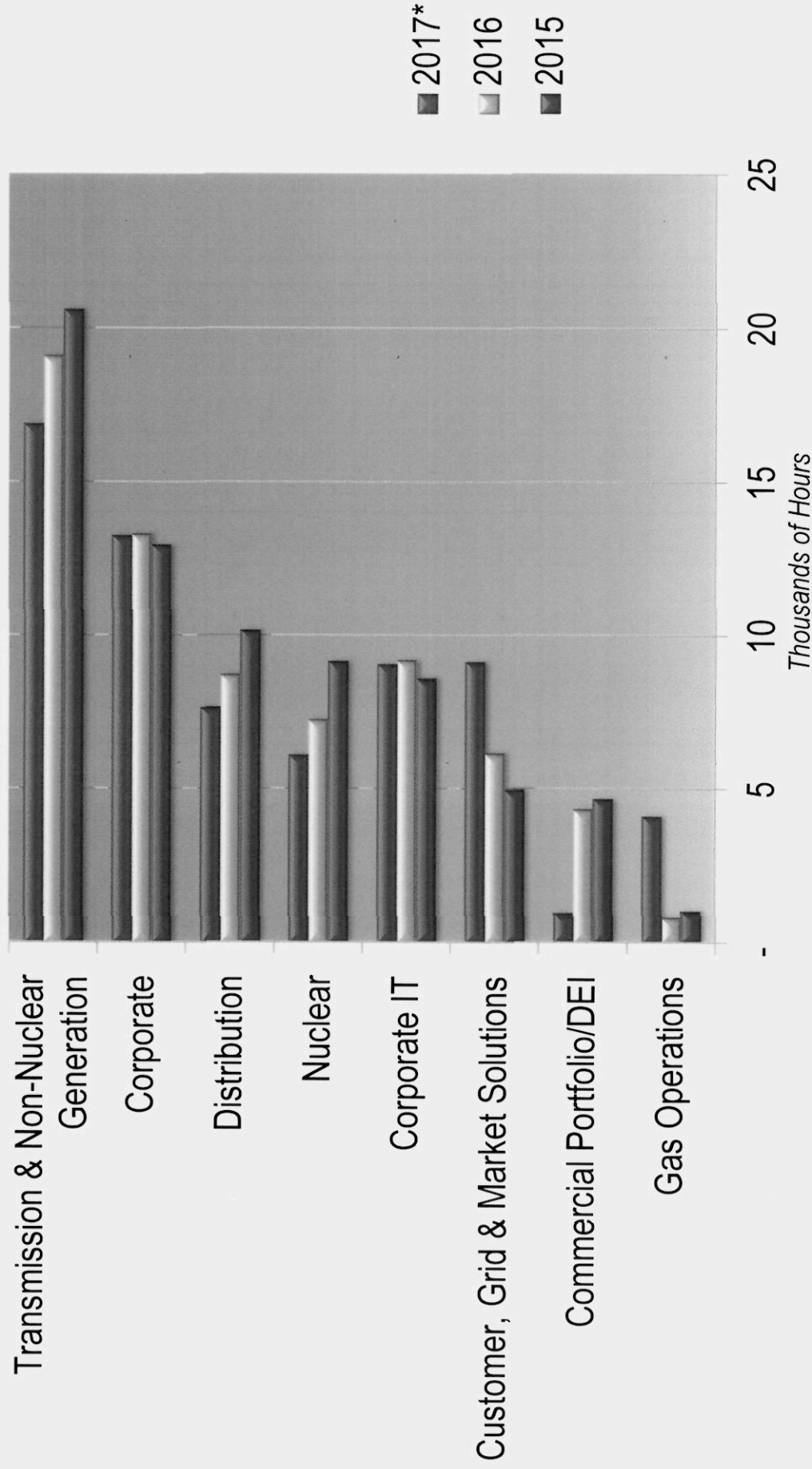
*Includes PNG, but excludes PNG SOX hours.

Thousands of Hours

Categories (y-axis):
- Transmission & Non-Nuclear Generation
- Corporate
- Distribution
- Nuclear
- Corporate IT
- Customer, Grid & Market Solutions
- Commercial Portfolio/DEI
- Gas Operations

x-axis: - 5 10 15 20 25

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2017 audit plan highlights

Risks	Primary Audit Coverage
Physical or cyber security breach	- Endpoint Forensics and Phishing Protection - NERC CIP - Nuclear Control Systems Cyber Security - Operational Technology Network Connections - Security Administration – Piedmont - Smart Grid Networked Devices Security - Third Party Vendor Audit - Virtualized Services for Operational Technology
Compliance (See Appendix B for full listing of compliance-related audits.)	- Edwardsport Process Safety Management - Environmental Monitoring and Reporting - Gas Price Reporting – Piedmont - NERC CIP - Oil Spill Management – Transmission and Distribution Operations - Political Contributions - Probation/Debarment Compliance Management - Process Safety Management of Hazardous Chemicals – FHO - Radiological Effluent and Environmental Monitoring Program
Customer service	- Common Digital Platform - Common Payment Interface - Residential Non-Pay Customer Disconnect Process
Cost transformation	- Inventory Controls Policy Post-Implementation Review – FHO - Inventory Controls Policy Post-Implementation Review – Nuclear - NextGen Strategy Design Review – FHO

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2017 audit plan highlights (continued)

Risks	Primary Audit Coverage
Employee and contractor safety	- Cranes and Rigging Program – FHO - EHS Management System – Piedmont - Switching and Tagging Program – Transmission
Fraud	- Customer Payment Arrangements - Customer Receipts Processes - Data Analytics – Fraud Risk Program - Easement and Substation Land Acquisition – Transmission
Capital project execution	- AMI Project Management and Deployment - Distribution Operations Project Management Processes – Midwest - Nuclear Fleet Digital Projects - Project Controls Processes – Transmission - Project Management Processes – Transmission
Aging assets	- Nuclear Long-term Asset Management Program
Workforce	- Nuclear Contractor In-Processing - Transmission Training Program
Gas pipeline integrity	- American Petroleum Institute Safety Management Standard Compliance – Piedmont - Geographic Information Systems – Piedmont - Leak Survey Performance and Management – Piedmont - Materials Tracking and Traceability – Piedmont
Piedmont Natural Gas integration	- Business Continuity Plan Review/Crisis Management Plan – Piedmont - Workday

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Proposed 2017 audit plan

Corporate

Financial/Compliance
Administrative and General Accounts
Affiliate Property Rates
Asset Recovery Processes
Cost Allocation Methodologies
Data Analytics – Fraud Risk Program
Disbursements and Employee Expense Reporting
Easement and Substation Land Acquisition – Transmission
Ethics Program
IT Contract Administration
Journal Entry Review
Miscellaneous Accounts Receivable
NERC CIP
Non-Nuclear Employee Background Screening
Officer and Director Expense Reporting
Political Contributions
Proxy Development – Executive Compensation Disclosures
SOX testing – Piedmont
State Affiliate Code of Conduct – North Carolina

Operational
Non-Nuclear Contractor Off-boarding Process

Information Technology
Agile Software Delivery Methodology Implementation
Alternate Data Center
Endpoint Forensics and Phishing Protection
External Facing Mobile Apps
Minimum Security Baseline
Operational Technology Network Connections
Security Administration – Piedmont
Security Risk Assessment Follow-up – Piedmont
Third Party Vendor Audit
Unix and Centrify Systems
Virtualized Services for Operational Technology
Virtual Private Network Implementation

Design Effectiveness Review
Office 365 Cloud Implementation
Workday

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Proposed 2017 audit plan (continued)

Electric Utility Operations

Non-Nuclear Generation

Financial/Compliance
Probation/Debarment Charging Practices
Probation/Debarment Compliance Management

Operational
Coal Combustion Products Project Change Request Process
Engineering Services Program Review – FHO
Inventory Controls Policy Post-Implementation Review – FHO
NextGen Strategy Design Review – FHO
Operational Excellence Framework Element Review
Project Controls Processes – Transmission

Environmental Health and Safety
Coal Combustion Products Project Management – Midwest
Cranes and Rigging Program – FHO
Edwardsport Process Safety Management
Environmental Monitoring and Reporting
Process Safety Management of Hazardous Chemicals – FHO
Tail Risk Follow-up

Information Technology
ComTrac Fuel Commodities Tracking System
IT Infrastructure – FHO

Nuclear

Operational
Consolidated Asset Suite Post-Implementation Review
Contractor In-Processing
Fleet Digital Projects
Inventory Controls Policy Post-Implementation Review
Long-term Asset Management Program

Environmental Health and Safety
Radiological Effluent and Environmental Monitoring Program

Information Technology
Control Systems Cyber Security

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Proposed 2017 audit plan (continued)

Electric Utility Operations

Distribution Operations

Operational
Distribution Operations Enable Post-Implementation Review
Process Standardization
Project Management Processes – Midwest
Workplan Development and Work Management Execution
Processes – Carolinas

Design Effectiveness Review
Enable Enterprise Asset Management (Transmission, Distribution
Operations, Gas, Vegetation)

Information Technology
Distribution Management System – Midwest
Service Suite 9

Transmission

Operational
Project Management Processes
Training Program
Transmission Enable Post-Implementation Review
Unit Cost Contract Management

Environmental Health and Safety
Oil Spill Management – Transmission and Distribution
Operations
Switching and Tagging Program

Information Technology
Substation Security (Non-CIP)

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Proposed 2017 audit plan (continued)

Electric Utility Operations

Customer, Grid and Market Solutions

Financial/Compliance
Customer Payment Arrangements
Customer Receipts Processes
Distributed Energy Technology Financial Processes
Residential Non-Pay Customer Disconnect Process

Operational
AMI Project Management and Deployment
Grid Investment Governance Processes
Outdoor Lighting System
Residential Meter Inventory Management

Design Effectiveness Review
Common Digital Platform
Customer System

Information Technology
Common Payment Interface
Smart Grid Networked Devices Security

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Proposed 2017 audit plan (continued)

Gas Utility Operations

Gas Operations

Financial/Compliance
Atlantic Coast Pipeline Joint Venture
Gas Price Reporting
Integrity Management Rider
Materials Tracking and Traceability

Operational
Business Continuity Plan Review/Crisis Management Plan

Environmental Health and Safety
American Petroleum Institute Safety Management Standard
Compliance
EHS Management System
Leak Survey Performance and Management

Design Effectiveness Review
Operations Assets and System Integrity Solutions Program
(OASIS)

Information Technology
Geographic Information Systems

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Proposed 2017 audit plan (continued)

Commercial Portfolio

Financial/Compliance
Duke Energy Renewables Administrative Agreement
Compliance
Property Records Management

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Appendices

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Appendix A – Annual audit planning process overview

Inputs

150+ Management interviews	Strategic priorities	External influences
System changes	Other risk assessments	SOX and audit results

Risk Assessment

Coordination

Tail risks	Enterprise risks	Enterprise Risk Management	EHS	Ethics and Compliance	Other risk coverage
Compliance commitments					

Audit Plan

Financial/Compliance	Information Technology	Operational
Design Effectiveness Reviews	Fraud	EHS

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Appendix B – Compliance-related audits

- **Federal/State utility regulations**
  - Administrative and General Accounts
  - Affiliate Property Rates*
  - Cost Allocation Methodologies*
  - Disbursements and Employee Expense Reporting
  - Gas Price Reporting – Piedmont*
  - Geographic Information Systems – Piedmont
  - Integrity Management Rider – Piedmont
  - Materials Tracking and Traceability – Piedmont
  - NERC CIP
  - Non-Nuclear Employee Background Screening
  - Residential Non-Pay Customer Disconnect Process
  - State Affiliate Code of Conduct – North Carolina*
- **Securities and Exchange Commission**
  - Journal Entry Review*
  - Political Contributions
  - Proxy Development – Executive Compensation Disclosures
  - SOX testing – Piedmont*
- **Plea / debarment requirements**
  - Duke Energy Renewables Administrative Agreement Compliance*
  - Ethics Program*

- Probation/Debarment Charging Practices
- Probation/Debarment Compliance Management
- **Environmental and safety regulations**
  - American Petroleum Institute Safety Management Standard Compliance – Piedmont
  - Coal Combustion Products Project Management – Midwest
  - Cranes and Rigging Program – FHO
  - Edwardsport Process Safety Management
  - Environmental Monitoring and Reporting
  - Leak Survey Performance and Management – Piedmont
  - Oil Spill Management – Transmission and Distribution Operations
  - EHS Management System – Piedmont
  - Process Safety Management of Hazardous Chemicals – FHO
  - Radiological Effluent and Environmental Monitoring Program
  - Switching and Tagging Program – Transmission

* Required audits

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Appendix C – Audit hour coverage trend

The chart below reflects legacy Duke standalone audit plan hours (and numbers) for 2017 compared to the two previous years.

Legend: ■ Operational ■ Financial/Compliance ■ IT ■ EHS

Year	Operational	Financial/Compliance	IT	EHS	Total
2017	24,290 (29)	15,990 (25)	15,920 (20)	6,800 (9)	63,000 (83)
2016	26,650 (23)	17,150 (25)	14,450 (18)	9,750 (11)	68,000 (77)
2015	33,500 (36)	16,650 (27)	12,300 (17)	8,600 (7)	71,050 (87)
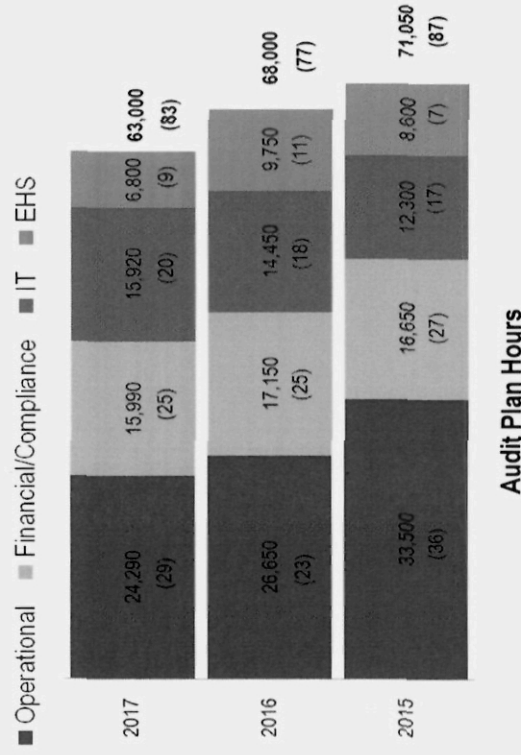
Audit Plan Hours

The 2017 legacy Duke standalone audit plan reflects a 5,000 hour or approximate 7% decrease from 2016, and an approximate 11% decrease from 2015. These decreases are justified for the following reasons:

- The sale of the company's International business was announced in 2016. This business generally required approximately 1,200 hours of audit coverage per year.
- Due to the maturing Health and Safety "second line of defense," the audit plan for 2017 has a reduction in safety audits.
- The department has made improvements in the use of data analytics which provide more efficient coverage through targeted sampling and scoping. In addition, improvements have been made to streamline audit documentation. While the total audit hours have decreased by approximately 5,000 hours, the number of audits has increased from 77 to 83.

For the reasons above and through comparisons with other large utility internal audit groups, these decreases and the resulting level of audit risk coverage for 2017 are reasonable.

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Appendix D - Risk oversight and governance at Duke Energy

Enterprise Risk Categories	Risk Oversight and Governance	2nd Line of Defense Groups Responsible for Monitoring and Managing Risk			Designed Role in Risk Mitigation
		Governance	Oversight	Support	
Strategic	Enterprise Risk Management	X			- Establish risk framework, provide tools and guidance on risk identification and mitigation
	Strategy Execution Office		X	X	- Provide support and monitoring for enterprise strategic objectives
Financial and Transaction	Enterprise Risk Management	X	X		- Establish risk framework, provide tools and guidance on financing methods and transaction risk identification and mitigation
	Finance Governance	X	X		- Provide governance over financial policies/procedures and SOX administration
Project	Project Management Center of Excellence (PMCoE)	X		X	- Develop project standards outlining framework for business unit application. Provide subject matter expertise in partnership with business
	Enterprise Risk Management	X			- Provide guidance on risk identification and mitigation

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Appendix D - Risk oversight and governance at Duke Energy (continued)

Enterprise Risk Categories	Risk Oversight and Governance	2nd Line of Defense Groups Responsible for Monitoring and Managing Risk			Designed Role in Risk Mitigation
		Governance	Oversight	Support	
	Ethics and Compliance	X	X	X	- Monitor and assess compliance adherence and business ethics
	Legal			X	- Provide interpretation and advice on legal requirements
	Security - Physical and IT	X	X	X	- Establish security requirements and business continuity in accordance with regulations and industry standards - Monitor compliance with standards
Operational (includes Compliance, Environmental, Health and Safety, Technology)	Environmental Health and Safety (EHS)	X	X	X	- Establish program standard, assess EHS risk across the company and execute assessments
	Human Resources	X		X	- Provide framework and standards to comply with workforce laws and regulations
	Nuclear Oversight		X		- Perform assessments and testing of processes and execution
	Enterprise Risk Management	X			- Provide guidance on risk identification and mitigation
	Operational Excellence	X	X		- Emerging

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DUKE ENERGY CORPORATION
DUKE ENERGY OHIO, INC.
SUMMARY OF MANAGEMENT POLICIES, PRACTICES AND ORGANIZATION
THE DUKE ENERGY FOUNDATION
SFR Reference: Chapter II (B)(9)(d)(v)

I.   Policy and Goal Setting

The Duke Energy Foundation (the "Foundation"), the philanthropic arm of Duke Energy (which includes Duke Energy Ohio), does not issue policy statements for the corporation, per se, but does establish Foundation policies as approved by the Foundation Trustees. The Foundation provides strategic philanthropic outreach to qualified nonprofit organizations in the communities served by Duke Energy.

The Foundation is organized and operated exclusively for charitable and educational purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code of 1986, as amended, or any corresponding United States Internal Revenue Law (the "Code"), including, without limitation, making grants to other Section 501(c)(3) organizations.

The goal of the Foundation is to support the communities served by Duke Energy and in which Duke Energy facilities are located to encourage initiative, creativity and collaboration by contributing to the total well-being of the community in three areas:

(1) Education and Workforce Development,
(2) Environment
(3) Community Impact

II.   Strategic Planning

Strategic planning for the Foundation begins with a review and understanding of relevant community needs. Additionally, external sources are monitored for emerging issues that could impact the Foundation's charitable giving decisions. Regular staff meetings and meetings of the Community Relationship Managers are held to discuss pending community issues, and to decide what items require attention and the timeframe under which the issue may be addressed. Where appropriate, outside consultants assist in the development of plans and programs. The Foundation Trustees review and approve strategic areas of focus, policies and the overall contributions budget.

III. Organizational Structure

The President of the Foundation reports to Duke Energy's Executive Vice President and Chief Legal Officer. The President of the Foundation provides overall leadership and management of the Foundation's activities. The Foundation has one Principal Community Affairs Consultant based in Cincinnati, Ohio; this individual is responsible for leading the Foundation's charitable giving efforts in Ohio. The Legal Department provides the Foundation legal support, and the Tax Department files the Foundation tax and information return. See Exhibit FCA-1.

IV. Responsibilities

The Foundation is the independent, 501(c)(3) entity organized exclusively for charitable and educational purposes. The Foundation is funded by Duke Energy shareholder dollars (as opposed to regulatory funds).

The Foundation also funds programs to stimulate employee and retiree volunteerism and philanthropic giving.

As part of the overall governance structure, roles and responsibilities are clearly defined as follows:

The Foundation is governed by the Foundation Trustees who are appointed by the Duke Energy CEO. The current Trustees are six members of Duke Energy's Senior Management Committee that report directly to Duke Energy's CEO. The Trustees:

- Establish overall Foundation policies and areas of focus
- Establish annual giving level
- Review / approve grant requests over $200K
- Meet quarterly and, between meetings may, approve major grant requests via e-mail

The Duke Energy Foundation staff:

- Recommends and manages Foundation policies / programs
- Ensures strong governance and control processes
- Provides transaction and financial management support
- Leads Regional Contributions Councils, including a Council for the Duke Energy Ohio's service territory, designed to ensure cross-functional input into the charitable contributions made in each of the Duke Energy utility subsidiary's regulated jurisdictions
- Serve as staff to Trustees / Executive Leadership on contributions requests

Regional Foundation Councils, composed of the local business unit President and business and community relations leaders named by the business unit president,

operate in Ohio/Kentucky, Indiana, Florida, Carolinas and Corporate/Charlotte. They:

- Establish regional giving plan and allocation (including United Way)
- Evaluate local grant requests. Approve grants from allocation up to limits of authority. Seek Trustee approval of major gifts.
- Meet quarterly or as needed
- Consult with Foundation on comparable initiatives and ways to leverage opportunities
- Maintain strong governance / record keeping
- Coordinate/communicate with other Regional Foundation Councils on grant decisions

V.   Practices and Procedures

The Foundation provides strategic philanthropic outreach to qualified nonprofit organizations in the communities served by Duke Energy. Grants are made in support of specific projects or designated programs that encourage initiative, creativity and collaboration by contributing to the total well-being of the community in three areas:

(1) Education and Workforce Development
(2) Environment
(3) Community Impact

Requests are made online at: www.duke-energy.com. The requests are received into the electronic system (called CyberGrants, provided by a third-party vendor). The requests are routed to the appropriate internal reviewer for consideration (i.e. Foundation Lead or Community Relations Manager), who, will mark for approval or decline the request. Grants marked for approval are then routed in the system for subsequent review based on the established delegation of authority (described in VI below). Organizations receive decline letters via e-mail, and the actual checks are usually hand delivered by local Duke Energy contacts.

- All grants include an internal Duke Energy business contact person, a clear reason for making the contribution that relates to the areas of focus, and regular reports on the measurable results of the project (for grants over $10,000)
- If the grant is for $200,000.00, a Memorandum of Understanding is signed by the organization and approved by the Foundation Trustees prior to making the commitment.
- Foundation Trustees and officers who are active in a recipient organization or serve a recipient organization in a leadership capacity are precluded from approving/voting on a grant request for the related recipient organization per the Foundation's Conflict of Interest Policy.

- Internal procedures are followed as required by the Internal Auditing Department to audit bank statements and fund appropriations to ensure that Foundation funds are being properly disbursed.

VI. Decision-Making and Control

Day-to-day decisions for distributions are made by the President, or a delegate within the Foundation. Decisions are only made locally, subject to the general oversight by the Trustees, by Community Relations Managers, Foundation Leads, and Regional Foundation Councils, who are provided with budgets to use throughout the year. Delegation of authority thresholds have been established for several levels, including the Community Relations Managers, Foundation Leads, and Foundation EVP. All grant requests over $200,000, are reviewed and approved by the Foundation Trustees.

The Foundation is involved in both proactive and reactive issues and consults frequently with Duke Energy management and Duke Energy expert technical personnel to determine appropriate responses. Grants over $10,000 are approved at the Foundation Regional Council.

The Foundation control processes include:

- Contributions Conflict of Interest Policy
- Detailed grant requests / "memorandum of understanding" for all requests for $200K and above
- Internal contact person of grant requests
- Segregation of duties between Trustees/Regional Councils/Foundation staff in approving grant requests; clear delegation of authority
- Check printing and internal distribution performed by independent contractor
- Monthly review of all disbursements by Foundation Lead
- Investment of Foundation assets by Treasury Department
- Foundation bank reconciliation by Corporate Accounting
- Internal Audit of Foundation

VII. Internal and External Communication

The Foundation maintains a web presence on duke-energy.com. Through this web presence, the Foundation publicizes its policies and guidelines for grant requests. Additional information on Foundation philanthropic programs and community initiatives, and Duke Energy customer assistance programs is also included.

VIII. Goal Attainment and Qualification

Goal Attainment and Qualification is subjective. The goal of the Foundation is to support the communities served by Duke Energy and in which Duke Energy

facilities are located to encourage initiative, creativity, and collaboration by contributing to the total well-being of the community in three areas:

(1) Education and Workforce Development
(2) Environment
(3) Community Impact

Obtaining quantifiable results in these areas is hard to measure. However, for grants of $100K or more, the Foundation requires a memorandum of understanding, with identified goals and a required project evaluation. These evaluation reports are reviewed by the appropriate internal sponsor.

IX. Legal Compliance and the Self-Dealing Prohibition

The Foundation makes all grants in compliance with the Foundation's Conflict of Interest Policy, other applicable Foundation or Duke Energy policies and procedures, and federal and state law. In particular, the Foundation staff works with grant recipients to ensure compliance with the federal prohibition on self-dealing. Foundation staff and others should advise applicant organizations that: "The Foundation desires that all resources of recipient organization be dedicated to accomplishing its philanthropic purposes. Accordingly, the recipient organization should not recognize the Foundation, its Trustees or staff with any goods or services." Generally, Duke Energy budgets should be used to purchase tickets to fundraising events sponsored by nonprofit organizations. If Foundation assets are used to sponsor an event and a Foundation staff may attend only if there is a business need documented in writing.
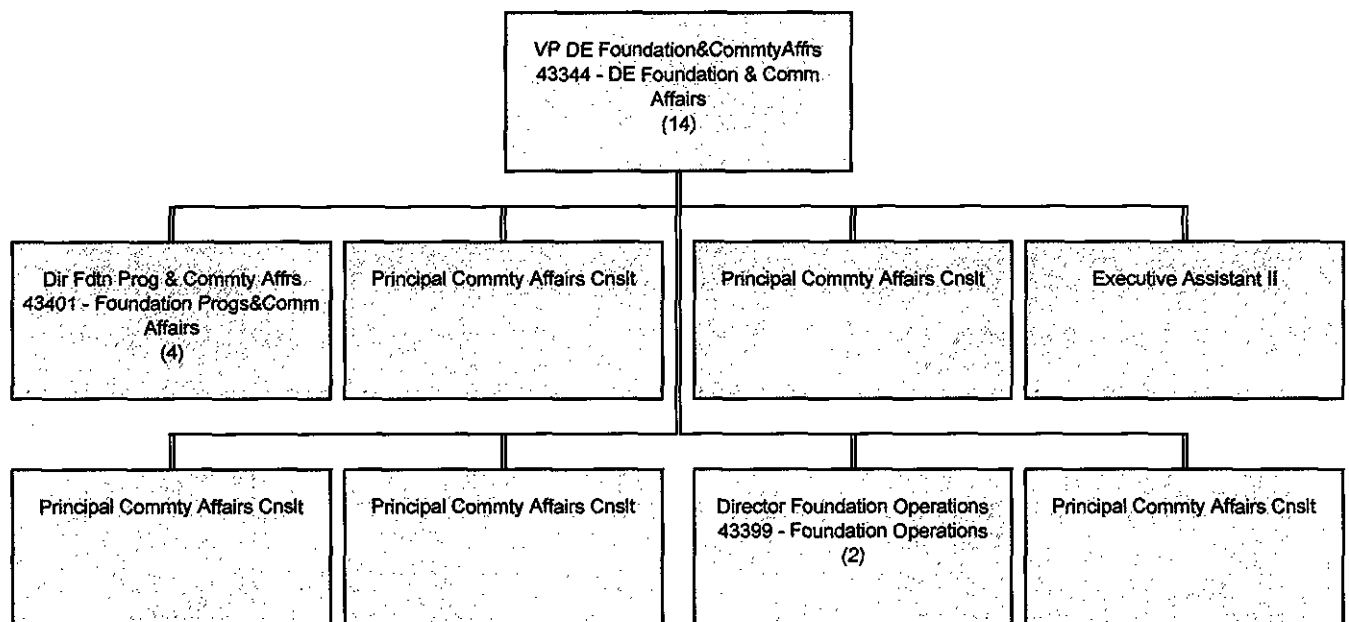
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Dir Fdtn Prog & Commty Affrs 43401 - Foundation Progs&Comm Affairs (4)	Principal Commty Affairs Cnslt	Principal Commty Affairs Cnslt	Executive Assistant II

Principal Commty Affairs Cnslt	Principal Commty Affairs Cnslt	Director Foundation Operations 43399 - Foundation Operations (2)	Principal Commty Affairs Cnslt

DUKE ENERGY CORPORATION
DUKE ENERGYOHIO, INC.
SUMMARY OF MANAGEMENT POLICIES, PRACTICES AND ORGANIZATION
INFORMATION TECHNOLOGY DEPARTMENT
SFR Reference: Chapter II (B) (9) (f) (i, ii, iii)

I.   Policy and Goal Setting

The purpose of the Duke Energy IT Department is to manage the optimum delivery of IT services in a manner that is transparent, scalable and cost effective while developing IT leadership and maintaining access to a skilled workforce. The IT department partners with the business to achieve company and financial objectives.

IT goals are established annually by the Vice President and Chief Information Officer (CIO) in support of corporate business objectives. The IT goals are:

- Operational excellence and efficiency
- Effective execution of the IT initiatives and strategies
- Advance enabling technology
- Manage IT risks
- Achieve growth and financial results

Specific incentive goals vary year to year but are always designed to support corporate and business objectives. Departmental IT Key Performance Indicators are established to measure performance against planned objectives. CIO staff divisions establish goals unique for their areas. Individual incentive plans include some combination of corporate, department and individual goals.

IT policy is established and approved by the Senior Vice President and Chief Information Officer (CIO). Policies are statements of management's commitment and expectations, and are created to manage risks.

Formal policies exist for:
- IT Governance
  - o Addresses management oversight, IT structure and functional areas, Exhibit IT-100.
- IT Asset Management
  - o Addresses use and handling of Company information, hardware and software, Exhibit IT-200.
- Electronic Communications
  - o Addresses governance for use of electronic technologies such as email and instant messaging, Exhibit IT-300.

- Enterprise Architecture
  - Addresses a consistent approach for developing IT architecture, Exhibit IT-400.
- IT Security
  - Address protection of information assets and ensures the confidentiality, integrity and availability of Company information, Exhibit IT-500.
- IT Service Management
  - Addresses practices and controls for IT Service Management functions, Exhibit IT-600.
- IT Program and Project Management
  - Addresses implementing a consistent approach to project management practices, Exhibit IT-700.

These IT-specific policies are an integral part of Duke Energy corporate policies.

II.   Strategic Planning & Long-Range Planning

IT conducts planning on several levels in collaboration with the Duke Energy business units. Strategic Planning is conducted annually by the CIO Staff to refine IT vision, strategy, and major initiatives for a 3- to 5-year horizon. As part of strategic planning, a Business Technology Plan (BTP) is developed collaboratively for each business unit. Each BTP is approved by the corresponding Technology Review Group (TRG), which is the IT governance body for the business unit. The IT Enterprise Architecture (EA) team leads development of an EA Domain Plan for each technical domain (i.e., Information, Infrastructure, Telecommunications, Cybersecurity and Applications). The BTPs and EA Domain Plans are integrated into an Enterprise Technology Plan to address business needs and technology requirements for the next 3 to 5 years.

Annual IT Business Planning is conducted to identify focus areas, initiatives and projects to be undertaken during the next 12 months in support of enterprise technology plans and IT department goals. IT Financial planning is conducted on an annual cycle as directed by Corporate Finance. Utilizing guidance from Corporate Finance, a department budget is set with input from all levels of management within IT. An IT Investment Management process is governed by representatives from the business units and allocates funds from the IT budget for projects to maintain IT assets and implement new business solutions.

III.   Organizational Structure

The Duke Energy IT function is a centralized department led by the IT Vice President and Chief Information Officer. The Vice President and CIO reports to the Business Transformation & Technology Senior Vice President, who in turn reports to the Executive Vice President and Chief Financial Officer, who in turn reports to the Chairman, President and Chief Executive Officer.

The divisions of the IT department include:
- IT Applications Delivery & Support

- Nuclear Generation and Commercial Delivery & Support
- IT Strategy & Governance and Grid Solutions, Transmission and Distribution Delivery & Support
- IT Infrastructure, Operations & Telecommunications
- Digital Transformation
- IT Transformation Office

The organization structure for information technology is attached as Exhibit IT-8.

The Cybersecurity function is outside IT and is a division within the Enterprise Security & Emergency Response department which is led by the Senior Vice President and Chief Security Officer.

IV.   Responsibilities

Information Technology enables business processes to safely and securely meet business needs, comply with regulatory requirements, create new capabilities, enhance operational efficiency, and optimize business operating costs. IT groups design, develop and support numerous applications and data management systems. Various hardware, software and systems are operated and maintained by IT personnel including workstations, servers, data centers and telecommunication networks. End user support is provided through a centrally managed Enterprise Help Desk. The Cybersecurity function in the Enterprise Security & Emergency Response department provides user provisioning, event monitoring, and vulnerability management.

IT is responsible for support of the major systems platforms utilized by company. Major systems platforms most relevant to Ohio operations and general corporate functions are shown in exhibit IT-900. IT will collaborate with the business units to execute corporate plans for these major systems including:

- Transition of legacy customer information systems into a modernized system
- Implementation of various customer solutions including refinements to the systems supporting Ohio Customer Choice
- Implementation and integration of metering and grid management systems to support advanced metering and grid automation
- Further integration and optimization of the enterprise asset management suite for Transmission and Distribution

V.   Practices and Procedures

Practices and procedures for IT functions are established by IT management. The IT operating model includes the following major functions:

- Governance & Management
- Business Planning & Relationship Management
- Strategy & Architecture

- Solutions Delivery & Support
- Portfolio & Project Management
- IT Service Management
- Cybersecurity (managed by Enterprise Security and Emergency Response)

These functions are embedded within the IT organization structure described above. Some functions, such as relationship management, are performed by multiple IT organizations since they each manage relations for different internal business partners.

The Governance & Management function includes the general management practices such as risk management, workforce planning, performance management, and financial management. Corporate practices and procedures are followed where applicable, such as risk management and financial management.

The Business Planning & Relationship Management (BPRM) function includes practices related to maintaining ongoing relations and collaborative planning with the Duke Energy business units. For example, development of the Business Technology Plans is a collaborate activity between BPRM and the business units. BPRM representatives also support the governance activities of the business-led Technology Review Groups in the business units. BPRM also facilitates the IT Investment Management process to allocate funding to business unit requests for IT project work.

The Strategy & Architecture function includes practices related to development of strategic plans and Enterprise Architecture plans. Strategic planning practices are formalized to ensure production and integration of specified technology plans across the enterprise, included the Business Technology Plans and Enterprise Technology Plan. The Enterprise Architecture practices are based on The Open Group Architecture Framework (TOGAF) and includes setting and enforcement of IT standards for the enterprise. There are also formal processes and procedures for developing Application Portfolio Management plans to optimize the Duke Energy application portfolio and its associated supports costs.

The Solutions Delivery & Support function includes practices related to development, implementation, and support of business applications. A formal methodology, IT Delivery Methods (ITDM), is followed for these practices. ITDM includes methods for applications delivery as well as for infrastructure and telecommunications.

The Portfolio & Project Management (PPM) function includes practices related to project planning, execution and portfolio management. The IT Project Management Office governs the PPM practices including specification and enforcement of standards and procedures for project classification, estimating, planning, and execution. The IT project portfolio is managed by the Portfolio & Project Management Application (PPMA). PPMA supports the project lifecycle including identification in strategic planning, funding by Investment Management, and project execution and closure. Where applicable corporate PPM practices and procedures are followed.

4

The IT Service Management function includes practices related to service delivery and support. These practices are based on the ITIL IT Service Management (ITSM) framework. Formal processes and procedures are defined for the ITSM processes including Change Management, Incident Management, Problem Management, and Configuration Management. An industry leading ITSM application is used to automate and manage the ITSM processes and also provide an online Service Catalog to the Duke Energy workforce. The Enterprise Help Desk provides automated and human support to users of the company's information technology.

The Cybersecurity function is provided by the Enterprise Security and Emergency Response (ESER) department. The ESER and IT departments collaborate extensively on cybersecurity matters and operations. Formal processes and procedures govern cybersecurity activities including user access management, application development, incident response, and securing information assets.

VI. Decision-Making and Control

The Chief Information Officer (CIO) is accountable for the oversight and operations necessary to provide information technology services to the enterprise. The CIO is supported by multiple governance bodies to ensure a broad perspective in achieving business alignment and cost transparency. The Enterprise Technology Review Board (ETRB) is chaired by the CIO includes executives from the Duke Energy business units. The ETRB is instrumental in making major technology direction and investment decisions. The Technology Review Board (TRB) is a more technical governance body that includes the business leaders of the Technology Review Groups in the business units. The TRB makes more tactical decisions, such as funding decisions for emerging work or adjustments to decisions made by the ETRB.

CIO Staff is responsible delivery of IT services to the enterprise. Financial responsibility exists at this level and the Staff is accountable for day-to-day operations, including staffing and sourcing. The CIO meets regularly with staff on an individual basis to ensure focused management and oversight of functional divisions within the IT department.

The CIO Staff actively participates in the development and execution of policy and standards related to oversight and compliance. For example, various functional areas provide updates to CIO Staff on a monthly basis including review of the project portfolio status, Key Performance Indicators, and critical service disruption events.

The Architecture Working Team (AWT) is responsible for setting IT technical standards. The AWT includes Enterprise Architects and technical architects from across the IT department. CIO Staff is informed of standard setting and enforcement activities as needed and provides oversight.

The IT PMO is a control function for project work.

Various compliance activities and audits are conducted by the IT compliance function within the Enterprise Security and Emergence response department, the internal audit department, and by various third-party auditors (for example, annual SOX and Payment Card Industry certification).

VII.   Internal and External Communication

Internal Communication

Internal communications are accomplished through a wide variety of departmental meetings and other communications mechanisms.

All levels of management within the department conduct regular staff meetings which serve as the primary means to collect and disseminate information within the department. The CIO will issue department wide communications discussing major initiatives or events as needed. Meetings of all IT managers are conducted as needed to discuss topics appropriate for IT leadership.

The IT function periodically publishes articles of general interest on the company's internal portal. Email is also used to communicate to targeted audiences for matters such as planned application outages. The Business Planning and Relationship Management functions within the three Delivery & Support divisions engage with the business units in various forums, such as the Technology Review Groups, and serves as a key communication channel to the business. Within the IT Operations division, an Enterprise Help Desk and a Local IT Client Services function provide assistance to the workforce for IT-related matters.

The company's internal Portal includes an IT Home page which serves as a reference library for the IT Department on governance, strategy, and policy and service information. It also provides access to the IT Service Catalog and Enterprise Help Desk. The IT Architecture and Standards page provides technology architecture and standards information to IT practitioners and end-users. The Cybersecurity page provides information such as the current cybersecurity threat level, viruses, safe computing best practices, and a monthly cybersecurity newsletter.

External Communication

The IT department communicates externally primarily through relationships with suppliers of IT products and services. These communications include responding to solicitations, issuing Requests for Information/Quotes/Proposals or other communication related to the execution of work under various contracts for products and services.

Contingent workers comprise a portion of the IT workforce and occasionally receive communications concerning health and safety, or other workforce related topics. As required, communications are coordinated through the respective staffing partners.

Personnel in the IT department participate in various technology and industry organizations as well as community programs such as Duke Energy's annual Global Services Event, local Chamber of Commerce activities, and educational programs.

VIII. Goal-Attainment and Qualification

Department employees participate in a Short Term Performance Plan (STPP) administered by Corporate Human Resources. These plans are developed annually and consist of a combination of corporate measures, departmental goals, and individual performance. Goals within a plan have levels of attainment which include minimum, target, and maximum payout levels. Achievement of performance goals is measured in part by departmental STPP Key Performance Indicators which measure key aspects of IT performance such as application availability and the number of critical service disruption events that occurred.

Financial measures are certified by Corporate Finance and approved by the Compensation Committee of the Board of Directors. Documentation of results, recommendations, and approved achievement are collected and recorded by Corporate Human Resources who also ensures approval by appropriate management. Payout results are input to the payroll process and become auditable business records.

DUKE ENERGY.
Duke Energy Policy

IT 100 – Information Technology Governance Policy

Applicability:	Applies to the IT Organization
Originator:	Managing Director IT Application Delivery
Approval:	Chief Information Officer
Approval Date:	1/15/2012
Revision Date:	3/30/2016
Revision No:	1.1

Statement of Purpose and Philosophy:

The IT 100 Information Technology (IT) Governance Policy is Duke Energy's statement of commitment to the management of the corporate IT Organization and oversight of the department's performance to ensure the Company's information and related technologies support Company objectives. The IT 100 Policy, including the supporting Standards, Processes and Procedures, shall be the governing documents to define the minimum requirements regarding governance practices.

The IT Organization implements and manages information technology-based solutions that enable business processes to meet operational requirements, comply with legal and regulatory requirements, create new capabilities, enhance operational efficiency and optimize operating costs. The following core principles are the foundation for this policy:

Strategic Alignment – The IT Organization partners with the Business to ensure goals and objectives are aligned with the Company's strategy and vision.

Risk Management – The IT Organization leverages a risk management framework to evaluate regulatory, financial and operational risks. Once identified, risks are addressed through mitigation and corrective actions.

Resource Management – The IT Organization establishes and deploys enabling IT capabilities, such as workforce, technologies and processes, to meet the Company's needs.

Performance Measurement – The IT Organization establishes management practices for assessing financial, operational and process activities.

1. Policy Expectations

1.1. Policies, standards, processes and procedures will be established to manage the IT Organization.

1.2. The IT Organization will operate in accordance with IT Governance principles. IT functions, such as strategy, risk management, architecture, compliance and cyber security, are integrated to support a strong control environment.

1.3. IT strategic and business technology plans will be developed and communicated.

1.4. An IT policy exception process will be established to evaluate situations when IT policy requirements are unable to be met. Documented approval by the appropriate level of management will be obtained to justify the level of risk being incurred.

IT 100 – Information Technology Governance Policy

2. Roles and Responsibilities

2.1. Chief Information Officer

The Chief Information Officer (CIO) is accountable for ensuring the lifecycle management of all IT policies as defined by the IT Policy Management Standard. The CIO will collaborate with the Chief Security Officer (CSO) to ensure cyber security policies and governance are aligned with the IT Governance principles defined in this policy. The CIO will designate individuals to sponsor necessary committees and establish working teams as appropriate to effectively govern the IT Organization.

2.2. Business Leaders

Business Leaders will work in close collaboration with respective IT leaders to establish key processes, such as technology investment governance, IT strategy and business technology planning.

2.3. Information Technology Leaders

IT Leaders are responsible for establishing a capable workforce, supporting IT policies, standards, processes and controls, and implementing and operating systems to enable business processes.

2.4. Working Teams

Working Teams will be established as necessary to review and recommend IT policies, procedures, standards, architecture, processes and controls.

2.5. IT Compliance

IT Compliance will work in conjunction with Corporate Compliance to ensure the IT organization adheres to company, legal and regulatory requirements.

3. Monitoring and Compliance

3.1. Persons who implement or use Duke Energy information and information technology assets are subject to monitoring to ensure compliance with this policy. Persons who violate this policy should be reported to management for appropriate corrective action.

4. Key Terms and Definitions

See IT Glossary

5. Related Documents

IT Governance Policy Stack

IT 200 – Information Technology Asset Management Policy

Applicability:	Applies to the Enterprise
Originator:	Managing Director IT Strategy & Data Management
Approval:	Chief Information Officer
Approval Date:	12/31/2011
Revision Date:	9/30/2013
Revision No:	3.0

Statement of Purpose and Philosophy:

The IT 200 Information Technology Asset Management Policy is Duke Energy's statement of commitment to the management of Company Information and Information Technology Assets , including any data produced, consumed, stored or transmitted. The intent of this policy is to establish governance for the acquisition, use and management of these assets.

The IT 200 Policy, including the supporting Standards, Processes and Procedures, and any related policies shall be the governing documents to define the minimum requirements regarding the acquisition, use and management of electronic Company Information and Information Technology Assets.

Duke Energy recognizes Company Information and Information Technology Assets are essential and valuable corporate assets that are deeply embedded in our Business values of integrity, stewardship and accountability. The following principles provide the foundation for this policy:

Accountability – Company Information and Information Technology Assets are considered corporate assets. Ownership responsibilities for the assets and the supporting processes will be assigned.

Appropriate Use – Expectations for the use of Company Information and Information Technology Assets will be determined based on business needs.

Centralized Acquisition – Acquisition of Information Technology Assets will be centrally managed within the corporate IT Organization.

Standardization – Standard information technology products will be defined for use throughout the Company.

Lifecycle Management – Management practices will be established that span the asset lifecycle.

1. Policy Expectations

1.1. All Company Information and Information Technology Assets are provided to the workforce for use in conducting Company business. Use of Company Information and Information Technology Assets must comply with the Duke Energy Code of Business Ethics; related policies, standards and procedures; and applicable federal, state, local and industry regulations.

1.2. Ownership and accountability for Company Information and Information Technology Assets will be established and managed throughout the asset's lifecycle.

1.3. All Company Information and Information Technology Assets will be managed through a lifecycle methodology, ensuring the asset is properly considered, acquired, inventoried, classified, maintained, supported and retired.

IT 200 –Information Technology Asset Management Policy

1.4. All Information Technology Assets and any external information technology related services (i.e., third party service providers) must be acquired through the corporate IT Organization.

1.5. Information Technology Assets must be consistent with the standard products and services authorized by the corporate IT Organization.

1.6. Total cost of ownership, including procurement, implementation, ongoing support and retirement costs will be factored into decisions to acquire Information Technology Assets.

1.7. Only authorized software is allowed on Duke Energy equipment. All computer software copyrights and licenses must be adhered to. This applies to any software, including shareware, freeware and open source software, residing on Information Technology Assets.

1.8. Company Information will be retained in accordance with the standards established by the Duke Energy Records Management Policy.

2. Roles and Responsibilities

2.1. Senior Management

Senior management is responsible for the stewardship of Company Information and Information Technology Assets within their business units, ensuring relevant roles and responsibilities have been assigned. Select senior managers will be designated as Data Sponsors.

2.2. Chief Information Officer

The Chief Information Officer (CIO) is accountable for ensuring the lifecycle management of this policy as defined by the IT Policy Management Standard. The CIO is responsible for ensuring programs and processes are in place for effective Information Technology Asset management.

2.3. All members of the Duke Energy workforce are to understand and comply with this policy.

2.4. Managers and supervisors are responsible for ensuring the workforce is aware of this policy.

3. Monitoring and Compliance

3.1. Persons who use Company Information or Information Technology Assets are subject to monitoring by Duke Energy for appropriate use and compliance with software license agreements, copyright laws and this policy. Violations of this policy should be reported to management for appropriate disciplinary action.

3.2. Persons who violate this policy are subject to corrective action, up to and including termination of employment.

4. Key Terms and Definitions

Capitalized terms used but not defined herein shall have the meaning ascribed to them in the IT Glossary.

5. Related Documents

IT Asset Management Policy Stack
Code of Business Ethics
Purchasing Controls Policy
Records Management Policy
Records and Information Management Compliance Standard

DUKE ENERGY.
Duke Energy Policy

IT 300 – Electronic Communications Policy

Applicability:	Applies to the Enterprise
Originator:	Managing Director IT Strategy & Data Management
Approval:	Chief Information Officer
Approval Date:	05/15/2008
Revision Date:	04/01/2015
Revision No:	3.1

Statement of Purpose and Philosophy:

The IT 300 Electronic Communications Policy is Duke Energy's statement of commitment to the management of electronic communications (i.e., email, instant messaging, video, pictures, telephone call records, voicemail,etc.). The intent of this policy is to establish governance for the use of these technologies, as well as, the Company Information exchanged during their use. The IT 300 Policy, including the supporting Standards, Processes and Procedures, and any related policies shall be the governing documents for the use of electronic communications.

Electronic communications is recognized as a vital communications medium, yet it carries the potential for rapid and unmanaged distribution. The following principle provides the foundation for this policy:

Stewardship – The content delivered, accessed and stored by electronic communications technologies must reflect the best interest of the Company, whether the content is communicated on private or public networks.

1. Policy Expectations

1.1. All electronic communications, both internal and external, must be created, transmitted and retained in accordance with the Duke Energy Code of Business Ethics; related policies, standards and procedures; and applicable federal, state, local and industry regulations.

1.2. All Company electronic communications systems and related messages, content and attachments are Company Information, and the property of Duke Energy.

1.3. Individuals are prohibited from using electronic communications to communicate or engage in the use or propagation of offensive or illegal materials.

2. Roles and Responsibilities Chief Information Officer

The Chief Information Officer (CIO) is accountable for ensuring the lifecycle management of this policy as defined by the IT Policy Management Standard.

2.1. All members of the Duke Energy workforce are to understand and comply with this policy.

2.2. Managers and supervisors are responsible for ensuring the workforce is aware of this policy.

3. Monitoring and Compliance

3.1. Electronic communications, including but not limited to email, instant messaging, telephone call records, voicemail and Internet activity, generated or received on Duke Energy systems are considered Company Information and Duke Energy property, and are subject to monitoring by the Company. Violations of this policy should be reported to management.

IT 300 – Electronic Communications Policy

3.2. Persons who violate this policy are subject to corrective action, up to and including termination of employment.

4. Key Terms and Definitions

Capitalized terms used but not defined herein shall have the meaning ascribed to them in the IT Glossary.

5. Related Documents

IT Electronic Communications Policy Stack
IT 500 Cyber Security Policy
IT 501 Cybersecurity Standard
Harassment Policy
Code of Business Ethics
Records and Information Management (RIM) Compliance Policy
Solicitation and Distribution Policy
Social Media Policy

IT 400 – Enterprise Architecture Policy

Applicability:	Applies to the IT Organization
Originator:	Managing Director IT Application Delivery
Approval:	Chief Information Officer
Approval Date:	1/15/2012
Revision Date:	4/16/2016
Revision No:	1.1

Statement of Purpose and Philosophy:

The IT 400 Enterprise Architecture Policy is Duke Energy's statement of commitment to maintaining a scalable, flexible and cost effective information technology (IT) environment. The intent of this policy is to ensure a systematic approach for developing IT architectures that are aligned with Duke Energy's business needs. The IT 400 Policy, including the supporting Standards, Processes and Procedures, shall be the governing documents to define the minimum requirements regarding enterprise architecture.

An enterprise architecture program provides the means to effectively manage the total cost to deliver and maintain information technology-based solutions, to accelerate the delivery cycle, and to ensure quality of products and services. The following principle provides the foundation for this policy:

Partnership – A collaborative approach between business and IT will be used for a successful convergence of business needs and processes, enabling information technologies, solution delivery and support.

1. Policy Expectations

1.1. Company IT investments will be assessed to ensure alignment with enterprise architecture practices and standards.

1.2. An Enterprise Architecture framework and planning process will be used to align business and IT strategies.

1.3. Implementation of enterprise architecture-related programs (i.e., application portfolio management) necessary to maximize value from IT products and services.

1.4. Business units and IT teams will collaborate to ensure business technology plans are developed to guide information technology investments and solution delivery.

2. Roles and Responsibilities

2.1. Chief Information Officer

The Chief Information Officer (CIO) is accountable for ensuring the lifecycle management of this policy as defined by the IT Policy Management Standard. The CIO is responsible for ensuring programs and processes are in place for an effective enterprise architecture program.

2.2. Enterprise Architects

Enterprise Architects are responsible for defining strategies, architectures, standards, processes, and standard products to ensure consistent implementation across the Company. Enterprise Architects maintain a cross functional view of the IT portfolio and identify opportunities for improvement, enhancement and standardization. Enterprise Architects engage in solution delivery to ensure compliance with enterprise architecture standards and practices.

IT 400 – Enterprise Architecture Policy

2.3. System Architects

System Architects are responsible for the IT architecture of one or more functional or technical portfolios (i.e., Finance systems, HR systems, workstations and data networks). Within their respective portfolios, System Architects will assure systems and infrastructures conform to standards and coordinate the work of Solution Architectects.

2.4. Solution Architects

Solution Architects are responsible for the IT architecture of a specific solution within a single functional area (i.e., Finance systems, HR systems, workstations and data networks). Within their specific solution, Solution Architects will assure systems and infrastructures conform to standards.

2.5. IT professionals are expected to follow and apply IT architecture practices and standards in their day-to-day activities.

3. Monitoring and Compliance

3.1. Persons who implement or use Duke Energy IT assets are subject to monitoring for compliance with this policy. Violations of this policy should be reported to management for appropriate corrective action.

4. Key Terms and Definitions

See IT Glossary

5. Related Documents

Enterprise Architecture Policy Stack

IT Architecture & Standards Site

DUKE ENERGY.
Duke Energy Policy

IT 500 – Cybersecurity Policy

Applicability:	Applies to the Enterprise
Originator:	Managing Director Cybersecurity and IT Compliance
Approval:	Chief Information Officer
Approval Date:	5/21/2015
Revision Date:	1/1/2017
Revision No:	3.1

Statement of Purpose and Philosophy:

The IT 500 Cybersecurity Policy is Duke Energy's statement of commitment to the management of the Company's cybersecurity program. The IT 500 Policy, including the supporting standards, processes and procedures, and any related policies shall be the governing documents to define the minimum requirements regarding cybersecurity.

The Cybersecurity Program at Duke Energy leverages the National Institute of Standards and Technology (NIST) Cybersecurity Framework, addresses regulatory requirements, and protects business functions, Company Information and assets by applying a balanced business-to-risk approach. The following core strategies are the foundation of the program:

Identify – Develop the organizational understanding to manage cybersecurity risk to information technology assets.

Protect – Implement safeguards that protect information technology assets. These safeguards leverage "Defense-in-Depth", "Least Privilege", and "Segregation of Duties" cybersecurity principles.

Detect – Deploy solutions to identify occurances of a potential cybersecurity event.

Respond – Take appropriate action regarding detection of a potential cybersecurity event.

Recover – Execute and test plans to restore all capabilities impaired by a potential cybersecurity event.

1. Policy Expectations

1.1. The Duke Energy workforce shall comply with the <u>cybersecurity standards</u> as noted in the table below:

Applies to	Standard
Industrial Control Systems	• IT 502 – Industrial Control Systems (ICS) Minimum Cybersecurity Standard
NERC CIP Regulated Systems	• IT 503 – NERC CIP Cybersecurity Standard
Smart Grid Systems	• IT 504 – Smart Grid Cybersecurity Standard
Nuclear Systems within 10 CFR 73.54	• Duke Energy Nuclear Generation Department Cybersecurity Plan
Enterprise (All other systems not covered by the above)	• IT 501 – Cybersecurity Standard

1.2. Anyone with access to Company Information or Information Technology Assets, regardless of format or medium, shall:

1.2.1. Take the necessary steps to understand and abide by the requirements of the policy and supporting standards, procedures, strategies and minimum security baselines.

IT 500 – Cybersecurity Policy

1.2.2. Exercise proper care in protecting Company Information and Information Technology Assets from risks that could jeopardize confidentiality, integrity or availability of the Company Information and information systems.

1.2.3. Report any actual or suspected cybersecurity events, such as lost or stolen Information Technology Assets, social engineering attempts, compromised credentials or efforts to circumvent cybersecurity controls.

1.2.4. Use Company Information and Information Technology Assets in compliance with the Duke Energy Code of Business Ethics; related policies, standards and procedures; and applicable federal, state, local and industry regulations.

2. Roles and Responsibilities

2.1. Chief Information Officer

The Chief Information Officer (CIO) is accountable for ensuring the lifecycle management of Duke Energy's cybersecurity strategy, policy, and standards.

2.2. Chief Security Officer

The Chief Security Officer is accountable for lifecycle management and implementation of the cybersecurity program, including information protection, security operations and incident response.

2.3. All members of the Duke Energy workforce are to understand and comply with this policy.

2.4. Management is responsible for ensuring the workforce is aware of this policy.

3. Monitoring and Compliance

3.1. Persons who use Company Information and information technology assets are subject to monitoring to ensure compliance with this policy. Violations of this policy shall be reported for appropriate disciplinary action.

3.2. Persons who violate this policy are subject to corrective action, up to and including termination of employment.

4. Key Terms and Definitions

Capitalized terms used but not defined herein shall have the meaning ascribed to them in the IT Glossary

5. Related Documents

Information Technology Policy Page
IT Cybersecurity Policy Stack
Code of Business Ethics

IT 600 – Information Technology Service Management Policy

Applicability:	Applies to the IT Organization
Originator:	Managing Director IT Infrastructure & Operations
Approval:	Chief Information Officer
Approval Date:	9/13/2007
Revision Date:	4/14/2015
Revision No:	2.1

Statement of Purpose and Philosophy:

The IT 600 Information Technology (IT) Service Management Policy is Duke Energy's statement of commitment to the management of the Company's IT resources and the delivery of IT services. The intent of this policy is to establish the disciplines, practices and controls to manage and deliver Duke Energy IT services and resources (i.e., hardware, software and support). The IT 600 Policy, including the supporting Standards, Processes and Procedures, shall be the governing documents for the IT Service Management functions.

IT Service Management ensures business efficiency and business partner satisfaction in relation to IT service management and delivery. The following principle provides the foundation for this policy:

Service Management – The IT Organization manages and delivers essential services to the Business and utilizes an IT Service Management framework to provide responsive business partner service while maintaining the availability and integrity of the IT environment.

1. Policy Expectations

1.1. An IT Service Management framework will be used to manage and deliver business partner services, such as change requests, problem resolutions, incident management and asset management.

1.2. An IT Service Management framework will be used to manage IT resources from acquisition to disposal.

1.3. An IT Service Management framework will be used to ensure service availability and integrity of the IT environment.

2. Roles and Responsibilities

2.1. Chief Information Officer

The Chief Information Officer (CIO) is accountable for ensuring the lifecycle management of Duke Energy's IT Service Management program as defined by the IT Policy Management Standard.

2.2. IT professionals are expected to follow and apply IT service management standards and procedures in their day-to-day activities.

IT 600 – Information Technology Service Management Policy

3. Monitoring and Compliance

3.1. Persons who implement or use Duke Energy IT resources are subject to monitoring for compliance with this policy. Violations of this policy should be reported to management for appropriate corrective action.

4. Key Terms and Definitions

IT Service Management (ITSM) Framework – An ITSM Framework provides the strategy, design, transition, operation and continuous improvement of IT services. It includes the coordination and control of various functions, processes and systems necessary to manage the full lifecycle of IT services. A key objective of this framework is to manage and deliver IT services based on the business partner's view of IT's value to the Business.

See IT Glossary

5. Related Documents

IT Service Management Policy Stack

IT 700 – Information Technology Program and Project Management Policy

Applicability:	Applies to the IT Organization
Originator:	Managing Director - IT Business Planning & Relationship Management
Approval:	Chief Information Officer
Approval Date:	1/15/2012
Revision Date:	4/30/2014
Revision No:	2.0

Statement of Purpose and Philosophy:

The IT 700 Information Technology (IT) Program and Project Management Policy represents Duke Energy's commitment to achieve excellence in the management of IT projects. The intent of this policy is to provide a consistent approach to project management that is compliant with the Enterprise Project Management Center of Excellence practices. The IT 700 Policy, including the supporting Standards, Processes and Procedures, shall be the governing documents to define the minimum requirements regarding IT project management.

Project management is essential for the successful delivery of IT services. The following principle provides the foundation for this policy:

Project Delivery – The IT Organization will follow a structured project management approach and delivery methodology to set and deliver on customer expectations while achieving project efficiencies and reporting transparency.

1. Policy Expectations

1.1. A standard project management framework and delivery methodology will be used to manage the execution of IT projects.

1.2. Project execution expectations will be defined based on the selected rank of the project. All projects must show existence of the the approved required deliverables.

1.3. This policy applies to all IT projects within Duke Energy.

2. Roles and Responsibilities

2.1. Chief Information Officer

The Chief Information Officer (CIO) is accountable for ensuring the lifecycle management of this policy as defined by the IT Policy Management Standard. In addition, the CIO is responsible for ensuring processes are in place for effective IT project management.

2.2. IT Project Management Office (PMO)

The IT Project Management Office function monitors compliance and assesses the effectiveness of the project management framework and delivery methodology. In addition, this function will provide training, assistance and procedural updates.

IT 700 – Information Technology Program and Project Management Policy

2.3. IT Project Manager

The IT Project Manager plans, monitors and controls, and closes projects, in a manner consistent with the expectations defined by the project management framework. In addition, the IT Project Manager provides feedback to the IT Project Management Office on process improvements.

2.4. IT Project Sponsor

The Project Sponsor provides project governance, oversight and support.

2.5. IT Manager

The IT Manager ensures employees and contingent workers on the project team comply with these requirements as applicable to their areas of responsibility.

3. Monitoring and Compliance

3.1. Persons participating in IT project management initiatives are subject to monitoring for compliance with this policy. Violations of this policy should be reported to management for appropriate corrective action.

4. Key Terms and Definitions

See IT Glossary.

5. Related Documents

IT Program & Project Management Policy Stack

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| Mgng Dir IT App Del & Suppt 43440 - Solutions Delivery & Support (282) | Mgng Dir IT Infra, Ops, & Tele 17920 - Infrastructure & Telecom (708) | Dir IT CIS Interface 25476 - IT Transformation Office (29) | Mgng Dir DigitalTransformation 24993 - Digital Transformation (75) |

| Executive Assistant II | Mgng Dir IT App Delivery & Sup 43441 - ITStrg&Gov,GridSol,T&DDel&Supt (250) | Mgng Dir Nuc Gen &Comm Dev&Sup 43439 - Generation,Comm,Del & Suppt (233) |

Duke Energy Major Systems Platforms

System Platform	Description	Human Resource Allocation*	Cost to Maintain**
Customer Management System	Manages customer account information to enable customer support functions.	Managed Service	$ 2,200,000
Customer Data Hub	Manages a collection of standardized customer data obtained from the customer source systems and is the authoritative source of data for application integration, and the authoritative source of data for reporting and analytics.	Managed Service	$ 210,000
Meter Reading	Head end system used to read smart meters.	Managed Service	$ 140,000
Meter Data Management System	Meter data management system to manage data from smart meters.	Managed Service	$ 750,000
Mobile Work Management System	Work management system for Power Delivery that provides a mobile platform with the ability to set appointments based on resource availability. Enables centralized dispatch of routine and trouble work with efficiencies gained through geographic work assignment.	Managed Service	$ 180,000
Distribution Management System	Controls distribution assets. Allows for remote switching and advanced engineering applications.	3	$ 320,000
Outage Management System	Suite of applications to manage distribution system outages	5	$ 97,000
Geographic information System	Provides GIS related functions and map products. Also provides network and land data to the outage management system, mobile mapping, design, circuit analysis, mobile work management, one call centers and asset management.	Managed Service	$ 180,000
Energy Management System	Controls transmission and generation assets. Performs generation dispatch to ensure load demand is met or market/sales requirements are met.	3	$ 490,000
Enterprise Asset Management	Suite of corporate applications that provides asset management, work order origination and tracking, scheduling, and supply chain functions	Managed Service	$ 51,000
Power Supplier Information System	Manages the relationship with multiple suppliers of electricity to track the suppliers and supplier credit risk	Managed Service	$ 430,000
Compliance Tracking	Toolkit for Regulatory Assurance and Compliance. Used to collect and maintain compliance information for regulatory agencies.	1	$ 170,000
Engineering Design	Common design solution that can be used across the different disciplines of engineering.	Managed Service	$ 110,000
Workforce Data Hub	Manages a collection of standardized workforce data obtained from the workforce source systems and is the authoritative source of data for application integration, and the authoritative source of data for reporting and analytics.	Managed Service	$ 87,000

* Managed Service indicates system support is provided via contract with an external IT service provider
** For systems also used in juridictions other than Ohio costs are proportioned based on the percentage of customers in Ohio

Duke Energy Requirements Management Document Inventory

This document provides an inventory of documents related to Duke Energy's IT Requirements Management process. The documents referenced in blue have been provided.

Duke Energy IT Applications Requirements Management Process

Requirements Management for IT Application Projects.docx – Exhibit IT1
This document provides an overview of the Duke Energy Requirements Management process and contains a description of the various documents associated with Requirements Management including:

- Requirements Management **Process Maps**
  - Requirements Mgmt - Requirements Management Lifecycle.vsd – Exhibit IT2
- **Guidelines** for organizing, planning, and executing Requirements Management activities
  - Guideline - Developing Requirements.docx – Exhibit IT3
  - Guideline - Elicitation.docx – Exhibit IT4
  - Guideline - Use Cases.docx – Exhibit IT5
  - Guideline - Business Process Model and Notation.docx – Exhibit IT6
  - Guideline - Prioritization.docx – Exhibit IT7
  - Guideline - Metrics.docx – Exhibit IT8
  - Guideline - Traceability.docx – Exhibit IT9
    - PL101 - CUSTOMER APPS.xlsx
  - Guideline - Review and Signoff.docx – Exhibit IT10
  - Guideline - Managing Changes.docx – Exhibit IT11
  - Guideline – Requirements Approach.docx – Exhibit IT12
- **Checklists and templates** to ensure an organized, consistent and thorough process in order to boost efficiency and reduce gaps / mistakes
  - Requirements Approach Template.docx – Exhibit IT13
  - Use Case Template.xlsx – Exhibit IT14
  - Non-Functional Requirements Checklist.docx – Exhibit IT15
  - Requirements Peer Review Checklist.docx – Exhibit IT16
  - Requirements Change Planning Worksheet.docx – Exhibit IT17

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Requirements Management

Overview

What is Requirements Management?

Requirements Management is the process of collecting, analyzing, refining, documenting, prioritizing, tracing and agreeing on requirements – as well as planning for their delivery. It includes adjusting to and controlling requirements changes during the project. Requirements Management involves communication between the project team members and stakeholders. It is a continuous process throughout a project.

The purpose of Requirements Management is to ensure that the organization validates and meets the needs of its customers and stakeholders.

Requirements Management Activities

The following list is a sample of the types of activities that are involved in Requirements Management for a project. This list is not all-inclusive.

> Planning / Scheduling of Requirements Management Activities
> Development of High-Level Requirements
> Current Capabilities Assessment
> Current & Future State Business / IT Process Design & Documentation
> Creation of User Scenarios / Use Cases / User Stories, etc.
> Development of Detail-Level Requirements
> Performing Fit / Gap Analysis
> Establishment of Traceability of Requirements
> Facilitating Requirements Review & Sign-Off
> Requirements Change Management
> Assisting in Defect Triage

Roles & Responsibilities

Business Analyst

The *Business Analyst* (BA) is the primary owner of the Requirements Management activities for a project. A Business Analyst is any person who performs business analysis activities, no matter what their job title or organizational role may be.

Business analysts must analyze and synthesize information provided by a large number of people who interact with the business, such as customers, staff, IT professionals, and executives. The business analyst is responsible for eliciting the actual needs of stakeholders, not simply their expressed desires. In many cases, the business analyst will also work to facilitate communication between organizational units. In particular, business analysts often play a central role in aligning the needs of business units with the capabilities delivered by information technology, and may serve as a "translator" between those groups.

Responsibilities

The following is a list of detailed activities for which the Business Analyst is responsible:

- Plan the requirements management process
- Plan the business analysis approach and activities
- Determine elicitation techniques that will be utilized to develop requirements
- Plan, schedule and facilitate elicitation sessions
- Develop high-level requirements (functional & non-functional)
- Define assumptions and constraints
- Perform current capabilities assessment
- Determine modeling approach(es) to be used
- Current and future state Business / IT process design and documentation
- Develop and document use cases / user scenarios
- Develop detail-level requirements (functional & non-functional)
- Determine requirements prioritization approach
- Schedule and facilitate prioritization of requirements
- Organize and identify / label requirements
- Perform fit / gap analysis
- Establish and maintain requirements traceability
- Prepare & communicate requirements package to relevant parties
- Schedule and participate in requirements peer review
- Schedule and facilitate requirements review with the business
- Obtain and document sign-off of requirements
- Manage changes to requirements
- Capture and report on Metrics
- Assist in translating requirements into test conditions
- Assist in defect triage
- Maintain requirements for re-use

Requirements Subject Matter Experts

Requirements Subject Matter Experts (SMEs) are the key resources in the Requirements Management process. There are two kinds of SMEs:

Functional Subject Matter Expert

Resource with in-depth knowledge of business processes. Key responsibilities include identification of requirements and participation in the development of supporting work products such as user scenarios / use cases and process flows. Participates in design and testing. This role is often filled by individuals who will be users of the solution.

Technical Subject Matter Expert

Participates in the assessment of current capabilities, development and review of functional and non-functional requirements, as well as fit gap analysis activities. Ensures that architecture, design, and build artifacts/activities align with requirements. (Ex: Architects, Designers, Developers, Tech Leads, etc.)

Requirements Management Process

An effective and mature Requirements Management process is a very important factor in the success for any IT Application project.

The following Process Map outlines the Requirements Management process for IT Applications projects at Duke Energy:

Requirements Management Lifecycle.vsd

Guidelines

The guidelines in this section are intended to provide project resources, in particular the assigned Business Analyst(s), with assistance in organizing, planning and executing some of the primary Requirements Management activities.

Developing Requirements

Requirements provide the foundation for a project. Development of good requirements drives better estimates, improved customer satisfaction, reduces costs, and delivers better results. Conversely, poor requirements definition and management is a leading factor for quality issues, cost and schedule variances, and expectation gaps.

This guideline provides information and best practices for developing good requirements.

Guideline - Developing Requirements.docx

Elicitation

Business Process Elicitation is the process of understanding the conditions or capabilities needed by a stakeholder to solve a specific problem or achieve an objective. Each project has business processes specific to their systems. This document will provide an overview of each of the following techniques, which can be used to elicit business processes and requirements.

Guideline - Elicitation.docx

Use Cases & User Stories

This guideline provides an overview of use cases, use case diagrams, and user stories. Use Cases provide additional clarity into the project's requirements for both the business and IT project team members. Use cases also are also helpful in developing test scripts as they list the steps needed to meet a business need.

Guideline - Use Cases.docx

Business Process Model and Notation (BPMN)

To support consistency across IT Applications projects, the Business Process Model and Notation (BPMN) Guideline specifies the Visio template and shapes that should be used when creating a Business Process Diagram (BPD) using BPMN.

This is the extent of the information included. Additional guidance on Business Process Modeling may be provided in the future.

Guideline - Business Process Model and Notation.docx

Prioritization

The Guideline to Requirements Prioritization provides information on various approaches that can be used to prioritize requirements, as well as best practices for when to use each approach.

Guideline - Prioritization.docx

Metrics

The Metrics Guideline outlines the required and recommended metrics for Requirements development and management. This includes the metric purpose, calculation and visibility method, and examples of basic tracking mechanisms.

Guideline - Metrics.docx

Traceability

The Traceability Guideline outlines the best practices for establishing requirements traceability throughout the Solution Delivery Life Cycle, including Analyze, Design, Build, and Test phases. It additionally covers how to apply traceability in the currently utilized requirements tools and/or applications.

Guideline - Traceability.docx

Review & Signoff

The Review and Signoff Guidelines provide best practice guidance on how to achieve a formal review and signoff on the requirements. These guidelines apply to all requirements, including but not limited to functional, non-functional, and transition requirements.

Guideline - Review and Signoff.docx

Managing Changes to Requirements

This document outlines the recommended process for managing changes to requirements after the Commit Gate. All requirements changes should be assessed for impact and handled appropriately based on their level of impact.

Guideline - Managing Changes.docx

Checklists & Templates

The following templates and checklists are intended to provide Business Analysts with a framework for execution of Requirements Management activities. The goal is to ensure an organized, consistent and thorough process in order to boost efficiency and reduce gaps / mistakes.

Requirements Approach

The Requirements Approach Template is included on the IT Applications Required Deliverables Matrix (RDM) and is considered a required template.

The purpose of this deliverable is to provide planning for the project's Requirements Management Lifecycle including, but not limited to, requirements development, review and signoff, managing changes, and final transition to production support.

Requirements Approach Template.docx

Use Case Template

The Use Case template provides a consistent format for documenting each Use Case, as well as a mechanism for managing the full inventory of Use Cases.

Use Case Template.xlsx

Non-Functional Requirements Checklist

The purpose of the Non-Functional Requirements Checklist is to serve as a thought generator around the types of items that should be considered when identifying and documenting non-functional requirements. The list can serve as a reference during the requirements gathering process.

Non-Functional Requirements Checklist.docx

Requirements Peer Review Checklist

The Requirements Peer Review Checklist is included on the IT Applications Required Deliverables Matrix (RDM). Execution of a Requirements Peer Review using this checklist is required. It is intended to validate that the requirements are complete, consistent, organized logically and are clear to any reader.

Requirements Peer Review Checklist.docx

Requirements Change Planning Worksheet

The Requirements Change Planning Worksheet provides a template for describing a significant requirements change and its estimated impact to all work streams (Design, Testing, Process, Deployment, Training, Change Management, etc.)

Requirements Change Planning Worksheet.docx

Exhibit IT2

Business Partner Relationship Management Process

Planning for Requirements

The Requirements Management Approach document may need to be refined at any project stage.

Start → Business case scope development & approval → BA reviews project scope (business case or charter) → Project schedule development → BA reviews current state documentation → BA defines the approach for managing the project's requirements → BA creates Requirements Mgmt Approach document → Stakeholders review Requirements Mgmt Approach document → **Reviews needed?**

- Yes → BA revises Requirements Mgmt Approach document (returns to Stakeholders review)
- No → Project team members approve Requirements Mgmt Approach document → **End**

The BA may provide schedule estimates for requirements elicitation and management activities

See the "Creating Process Diagrams" tab if no current state diagrams are available.

How will requirements be managed during the project?

Reviewers: Business and IT PMs, key team leads, Business and IT SME(s), Tech Lead, Test Lead, other BAs supporting the project

High-level business requirement: a statement of a business need.

In addition to delivery projects, high-level requirements are also used for:
- Creating Class 3 estimates for projects
- Development of a Proof of Concept (POC) or pilot
- Defining the scope of work for a Request for Proposal (RFP) or Request for Quote (RFQ)
- Identifying all a high level business needs in a Request for Information (RFI)

Note: Although high level requirements are typically created during the Plan phase, during the Analyze phase additional requirement elicitation may uncover the need to add additional high-level requirements.

Start

BA reviews current state documentation

See the "Creating Process Diagrams" tab if no current state diagrams are available

Requirements elicitation with BA and business SMEs

Elicitation techniques include interviews, focus groups, facilitated workshops, brainstorming, questionnaires/surveys, product prototypes

BA sends any meeting notes to participants & stores notes on project SharePoint

As needed

BA creates high level business requirements

Typically maintained in the PL101, Quality Center (QC), or Enterprise Architect (EA)

Peer review of high level requirements

The peer review is performed by an experienced BA or Tech Lead

Revision(s) needed? — Yes → BA revises high level requirements / No →

Stakeholders review high level requirements

Typically with the Business PM, project stakeholders, IT PM

Changes made since last peer review? — Yes → BA revises high level requirements / No →

Stakeholders approve/prioritize/signoff high-level requirements? — No →

Project scope, schedule/cost change? — Yes → IT PM initiates a project change request → No → A

Change in project scope, schedule, or cost. A clarification to existing or new detailed requirements that can be absorbed by technical and test teams downstream without affecting the schedule or cost is considered 'not significant' but require proper consultation and communication to downstream team resources.

A

Using QC to manage testing? — Yes → / No →

Were requirements initially created in QC? — Yes → / No → BA adds high level requirements to Quality Center

BA adds high level requirements to Quality Center — No → / Yes →

Baseline requirements in Quality Center

End

For assistance in uploading and maintaining requirements in QC, see https://team.duke-energy.com/sites/TestingServices/Shared%20Documents/0111%20-%20Help%20and%20How%20to%20and%20QC%20Training/Quality%20Center%20Training%20User%20Training.pdf

All requirements that are not initially created in Quality Center or Enterprise Architect are maintained in either the PL101, a Business Requirements Document (BRD), or the Issues Log on the project's SharePoint. The PL101/BRD is stored on the project's SharePoint site.

Back to Overview

Start → A missed requirement or the need to change a requirement is identified → BA schedules review meeting with business/IT SMEs → New or revised reqt approved/ prioritized/signed off by business/IT SMEs → BA provides requirements metrics to IT PM for project status report → BA baselines new requirement(s) in Quality Center → BA/SMEs revise future state process diagrams → BA/SMEs revise use cases/user stories → BA reviews wireframes/ mockups changes with business SMEs → BA/Tech Lead/ Developer revises wireframes/ mockups, if needed → Changes needed? → Business SMEs approve wireframes/ mockups changes

Throughout the project new requirements or the need to revise a requirement can be identified. These can be identified by anyone involved with the project.

and % of requirements changed (added, deleted, modified)

If QC used for testing

As needed

Business, IT, Change Management, Testing

IT PM initiates a project change request → BA/Tech Lead notifies project technical team members of the change → BA/Tech Lead updates Rev/Imp analysis → Project tech team members review design documents → BA/Tech Lead updates requirements traceability to design documents → BA/Tech Lead updates requirements traceability to code module → Test Lead/ Test Analyst adds or revises test scripts → BA/Test Lead, Test Analyst creates/updates traceability to test scripts → End

Project scope, schedule/cost change?

Maintained in the PL101

As needed

As needed, Maintained in PL101.

As needed, Maintained in PL101.

As needed, Maintained in QC or PL101

Change in project scope, schedule, or cost. A clarification to existing or new detailed requirements that can be absorbed by technical and test teams downstream without affecting the schedule or cost are considered 'not significant' but require proper consultation and communication to downstream team resources

Back to Overview

Duke Energy Requirements Management Process

Creating or Updating the Process Diagrams

The process is the same for both current state and future state diagrams

Maintained in PL101

Duke Energy Proprietary

Swimlane 1: Business Analyst as Owner, Various Participants

Start → BA schedules use cases/user stories workshop(s) → Participants create draft use cases/user stories → BA sends draft use cases/user stories to meeting participants → Meeting participants review draft use cases/user stories → Changes needed?

- Yes → BA/business SMEs revise use cases/user stories → (back to Meeting participants review)
- No → BA stores use cases/user stories on project SharePoint → Were new requirements or changes to requirements identified?
  - Yes, Technical → Detailed Tech Reqs
  - Yes, Business → Detailed Bus Reqs
  - No → BA/Tech Lead reviews use cases/user stories with project's technical team members → End

Note: Business SMEs, IT/Business PMs, Change Management. It is helpful to the Tech Lead and Test Lead if they also attend.

Swimlane 2: Requirements Management as Owner, Various Participants

Start → The need for a use case/user story change is identified → Nature of the change?
- New → (to Start of swimlane 1)
- Revise → BA schedules meeting to revise use case/user stories → Meeting participants revise use cases/user stories → BA sends draft use cases/user stories to meeting participants → Meeting participants review draft use cases/user stories → Changes needed?
  - Yes → BA/business SMEs revise use cases/user stories
  - No → BA stores revised use cases/user stories on project SharePoint → Were new requirements or changes to requirements identified?
    - Yes, Technical → Detailed Tech Reqs
    - Yes, Business → Detailed Bus Reqs
    - No → BA/Tech Lead reviews use cases/user stories with changes with project's technical team members → End

Note: Can be identified by anyone associated with the project

Note: Business SMEs, IT/Business PMs, Change Management. It is helpful to the Tech Lead and Test Lead if they also attend.

BA establishes or updates reqs traceability to process diagrams/use cases/user stories

Maintained in PL101

Back to Overview

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Guideline to Developing Requirements

Overview

Requirements provide the foundation for a project. Development of good requirements drives better estimates, improved customer satisfaction, reduces costs, and delivers better results. Conversely, poor requirements definition and management is a leading factor for quality issues, cost and schedule variances, and expectation gap.

The purpose of this guideline is to provide information and best practices for developing good requirements.

Types of Requirements

Both functional and non-functional requirements should be documented.

Functional Requirements describe the behaviors and capabilities of the product. Non-Functional Requirements describe the qualities the solution must have or environmental conditions that must exist for the system to be effective.

Functional Requirements

A Functional Requirement:

- is a statement of what a system must do
- is measured in "yes" or "no" terms
- usually employs the word "shall"

Examples:

The software shall display an option to add a participant

The software shall summon the operator if the participant clicks the Operator Help icon.

Non-Functional Requirements

A Non-Functional Requirement:

- can be a known limitation or constraint on resources or design
  - usually measured in yes/no terms
  - typically employs the word 'must'

  Examples:

  The retail cost of the software must be between $175 and $199.

  The help file must be released in English, French and Spanish.

- can be a measure of how well the system must do what it does
  - is measured over an interval or range

o usually employs the word 'must'
o includes the "ilities" (e.g., quality, reliability, scalability, availability), among others

Proper identification of non-functional requirements up front is key to ensure that appropriate solutions are put forth and to ensure project estimates and plans accurately reflect the work required for the successful execution of a project.

There are many types of non-functional requirements to consider.

Refer to the Non-Functional Requirements Checklist in the Appendix for sample types of non-functional requirements and some items to consider for each of the types.

Levels of Requirements Detail

High-level requirements are typically developed during the Plan Phase of a project, while detailed (or product-level) requirements are developed during the Analyze (and subsequent) phases of the project.

Requirements determination is a process of refinement and iteration. The progressive elaboration of requirements involves continuously refining and detailing requirements as more specific information is uncovered throughout the project lifecycle. Requirements are documented at a greater level of detail as the project evolves.

The process defined in this document for developing requirements can be applied to both high-level and detailed-level requirements.

High-Level Requirements

A collection of statements that identify the breadth of what a solution must provide in order to meet the business needs. These are an overview of the end-to-end business activities, groupings of functions, identification of interfaces, applicable business policies and non-functional constraints.

Detailed-Level Requirements

A set of detailed declarative statements and models that define what the solution must provide. This includes detailed functional and non-functional requirements documented with textual statements, use cases, data models, interface definitions, etc.

Detailed requirements must meet quality criteria. See Characteristics of Good Requirements in this document.

Requirements Development Process

There are four key activities in the process of developing requirements:

- Elicitation
- Analysis
- Specification
- Validation

These activities often occur in parallel and therefore are not necessarily implemented sequentially. As you can see from this graphic representation, they are typically accomplished in multiple iterations.
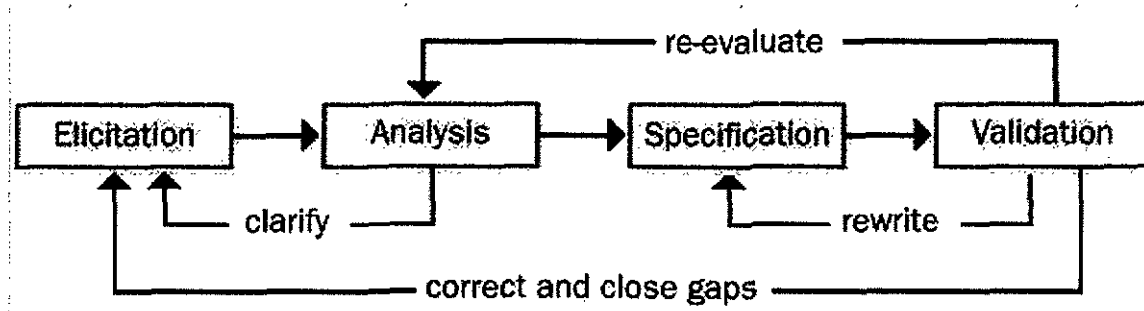
For details on how Requirements Development fits into the overall Requirements Management process for the project, please refer to the Requirements Management Process Map in the Appendix.

Elicitation

Elicitation is sometimes called requirements gathering. Elicitation is about collecting the requirements from stakeholders.

Identifying requirements forms the foundation for selecting or designing the technical solution.

Derive requirements through elicitation from stakeholders by understanding their needs and demands.

1. Understand the project vision and scope

2. Identify appropriate representatives from stakeholder groups

3. Understand user tasks and goals

4. Select the appropriate elicitation technique(s).

    - Refer to the Guideline to Elicitation for a list of elicitation techniques and information on each, as well a list of sample elicitation questions.

5. Leverage existing documentation when possible / applicable

    - Design documentation or requirements from historical projects
    - Release notes if a vendor/packaged solution

Analysis

Requirements analysis involves analyzing, refining and prioritizing requirements.

- Ensure all stakeholders understand what the requirements mean
- Identify inconsistent, incomplete, redundant and conflicting requirements.
- Find errors, omissions or other deficiencies.
- Check for quality and comprehensiveness. References:
  - Guidelines for Good Requirements
  - Requirements Peer Review Checklist
  - Non-Functional Requirements Checklist
- Prioritize based upon project goals.
  - Consider impacts to functionality, performance, cost, schedule, and risk.
    - Refer to the Guideline to Requirements Prioritization document for information on prioritization approaches.
  - Categories:
    - HIGH: Essential / Core
    - MEDIUM: Beneficial / Desirable
    - LOW: Optional

Specification

Document the requirements along with source, dependencies, priority and traceability.

1. Create written documentation, specifications and/or models.
2. Use templates and review sample documents under IT PMO Templates and Project Samples on the IT PMO Reference SharePoint site to ensure quality.
3. Allow time for iterations.
4. Get to the right level of detail (and no further).
5. Identify 1 or 2 test cases to verify implementation of the requirement.
6. Package and communicate to stakeholders.

Validation

Verify whether the requirements list is complete and consistent with the needs of business.

Refer to the Guideline to Review & Sign-Off in the Appendix for more details on this process.

1. Best practices include a peer review of the requirements. Refer to the Requirements Peer Review Checklist in the Appendix.

2. Review with the Requirements Owner(s) to ensure mutual understanding and set the stage for acceptance.

- Walkthroughs are always a best practice.
- The formality level of the walkthrough is driven by the needs of the project.

3. Gain approval to establish baseline and change criteria.

Guidelines for Good Requirements

Characteristics of Good Requirements

Well written requirements have the following characteristics:

Attainable

Requirements are realistic.

The requirements can be practically implemented, by the assigned project resources, according to the project schedule and within budget.

Complete & Correct

Complete requirements means that everything the system is supposed to do is captured in the requirements.

Each requirement is accurately stated and represents something required of the solution to be built or configured.

- All stakeholders are represented
- Tasks are identified
- Needs are represented

Consistent

The requirement, or subset of requirements, does not conflict with other requirements.

Lower-level requirements are consistent with the high-level requirements.

Especially when several owners develop requirements, it's important to have someone to check for conflicts and inconsistencies.

Ensure that conflicting terminology, contradictory actions or impossible combinations have been eliminated.

Design Independent

The requirements are focused on "what" not "how". This is the basic difference between requirements and specifications.

Ask these questions:

- Do requirements state what is to be done, not how it will be done?
- Do requirements talk about behaviors, not what the computer screen looks like?

Prioritized

Requirements are usually prioritized according to their importance to the solution, i.e.:

- HIGH: Essential / Core
  - o The system will not be acceptable until the requirements are provided.

- MEDIUM: Beneficial / Desirable
  - Would enhance the system, but if absent would not be make it unacceptable
- LOW: Optional
  - Worthwhile if resources permit (or in future)

Unambiguous

The requirements can be interpreted only one way; clear terms eliminate ambiguity.

Ask these questions:

- Would a reader draw only one interpretation?
- Would multiple readers arrive at the same interpretation?
- Is each requirement succinct, simple and in straightforward language of the user?

Try not to use such words as "or," "etc.," and "so on".

Unique & Traceable

Each requirement is unique and traceable back to a business process and forward through testing.

The origin and author of each requirement is clear.

Each requirement is individually numbered according to a scheme that identifies the functional component it relates to.

Requirements for each module or functional area are owned by a manager in that area (not by IT staff).

Ask these questions:

- Is each requirement uniquely identified and documented, with an owner assigned?
- Can each requirement be traced every step of the way through testing?

Verifiable / Testable

For a requirement to be effective, it must be verifiable. A requirement is verifiable if it can be proven that the requirement was correctly implemented.

Verifiable Requirements are:

- Specific
- Unambiguous and (when possible) quantitative
- Can be measured and confirmed by examination, analysis, test or demonstration

Requirements are often unverifiable because we speak in *Natural Language* which includes weak words that are vague or ambiguous.

Ideally, define acceptance criteria for each requirement.

Requirements provide the basis for system acceptance testing and the development of test objectives and scripts.

If it can't be tested, it should not be a requirement.

Characteristics of Bad Requirements

Ambiguity

Try not to use such words as "or," "etc.," and "so on".

Building in Escape Clauses

Dangerous escapes include, "if," "but," "when," "except," "unless," and "although".

Combining Requirements

Requirements which contain conjunctions are dangerous - keep each requirement as a single sentence.

Designing the System

Danger signs include names of components, materials, software objects, fields and records.

Speculating

Dangerous words include "usually," "generally," "often,", "normally," "typically".

Suggestions of Possibilities

Exclude terms such as "may," "might," "should," "ought," "could," "perhaps," and "probably".

Using Vague Indefinable Terms

Vague terms include "user-friendly," "highly versatile," "flexible," "to the maximum extent," "approximately," "as much as possible".

Wishful Thinking

Don't ask for the impossible - "100% reliable," "safe," "handle all failures," "guarantee," "fully upgradeable," or "run on all platforms."

Avoid Natural Language

What is Natural Language?

Natural language is unconstrained, informal language as it is used in every day speech and writing (e.g., email).

Natural language is the most common medium for expressing requirements in most industries; it is problematic because it is not precise.

Examples of 'BAD Requirements' using Natural Language

Requirement #1   System must be easy to use

o *What does "easy to use" mean? It is subjective (reader dependent)*

Requirement #2   Order processing must be fast

o *How long is "fast"? Seconds, minutes or hours? Can we test "fast"?*

Requirement #3   The software must support at least 25 users

o *What is the meaning of "support"? Are these concurrent users or not?*

o *How many is "at least" 25 users? 26 users? 200,000 users?*

Requirement #4   The system will be reliable

o *What is "reliable"? Can we test for it?*

Requirement #5   The software configuration should be easy to use

- "should" implies optionality

Avoid Pitfalls

Pitfalls Checklist

	Pitfalls Checklist	
☑	**Type of Pitfall**	**Items to Consider**
☐	New Applications	Up front rigor is needed. Consider environment and security design for new applications.
☐	Performance	Test with production-like volumes and data to mimic production.
☐	Reporting	Reporting build is dependent on the operational system, data captured, and interfaces and yet is often thought about last. Reporting drives key baseline design decisions - understand the purpose of the report(s) up front.
☐	User Experience	User experience includes both internal and external customers. Will the system be self-explanatory or intuitive so users will not be dependent on job aids?

Appendix

References

- IT PMO Reference SharePoint

- Requirements Management Lifecycle Process Map

- Non-Functional Requirements Checklist

- Requirements Peer Review Checklist

- Guideline to Elicitation

- Guideline to Requirements Prioritization

- Guideline for Review & Signoff

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Guideline to Elicitation

Overview

Business Process Elicitation is the process of understanding the conditions or capabilities needed by a stakeholder to solve a specific problem or achieve an objective. Each project has business processes specific to their systems. This document will provide an overview of each of the following techniques, which can be used to elicit business processes and requirements.

- Document Analysis
- Observation
- Interviews
- Surveys / Questionnaires
- Requirement Workshops
- Brainstorming
- Focus Groups
- Interface Analysis
- Prototyping
- Reverse Engineering

Elicitation Techniques

Document Analysis

Technique with which research is done to understand the current system and environment. This technique is usually the first one done. It will help you think through who you need to speak with, what additional techniques to use, and what questions to ask.

Be careful to verify the data you read in the documents because the documents might be outdated.

Existing documentation about the system includes, but is not limited to:

- Reports
- Letters
- Brochures
- Reference or Training Materials
- Screen Layouts
- Forms
- Procedure Manuals
- System Documentation
  - Installation guides
  - User Guides
  - Frequently Asked Questions Guides

Observation

Observing users at work is an excellent way to identify the business area's process, workflow, environmental constraints, and business rules.

Observation is a great way to identify exceptions in the process. Many times when you speak with SMEs, they will tell you how the process is supposed to work, but won't share the things they do to make the process actually work.

Ways to Observe:

1. Pure observation without interaction – just watch the worker perform the task

2. Observe with interaction – observe and ask questions about why tasks are performed a certain way

3. Perform – actually perform the task yourself <u>IN A SANDBOX / TRAINING ENVIROMENT</u>

When to Use This Technique:

1. When automating a manual process

2. When you are unfamiliar with the business process

3. When software must be integrated with manual steps of a process

Tips:

- Get permissions before observing, and schedule their time for convenience
- Keep in mind that people may behave differently when being observed
- Observe all levels of workers within the scope of the project
- Observe at various times during the day, week, or normal cycle
- Ask if there are tasks that are only performed on an ad hoc basis or once a year
- Identify exceptions in the user process
- Capture process metrics
- Identify environmental constraints

Interviews

This is the most common form of eliciting requirements. Preferably with 1-2 people at a time.

1. Develop questions in advance
2. Treat interviews like official meetings
   - Create a clear objective
   - Create Agenda
   - Set timeframe for the meeting/interview
   - Closure of meeting
   - Track action items to be completed
   - Capture meeting minutes and distribute
3. Familiarize yourself with the interviewee
   - Position within the organization
   - Familiarity with the project
   - How will they be impacted with the project
   - If they are a decision maker

Surveys / Questionnaires

Conducting a survey or questionnaire is useful when:

- Resources are in a different location
- There are a large number of SMEs
- Results will be compiled for statistical analysis

Content and distribution are factors that require considerable planning if you expect a high return rate and useful results.

1. Layout must be clear

2. Use close ended questions (Yes/No or Multiple Choice)

3. Limit the questions to one or two subject matters

4. Make it convenient for the person to respond

5. Make sure to have business owner / SME review the questionnaire to make sure questions are as intended.

Workshops

Facilitated Workshops that focus on requirements. A facilitated session is a highly structured, intensive workshop in which participants are guided by the Business Analyst to develop the requirements of the system.

Brainstorming

Brainstorming is an invaluable tool when no solution is apparent. It is also a great way to get a group of people energized to move the project forward

These sessions can be performed either silently or verbally.

1. Introduce the topic and set a time limit

2. Generate ideas following the brainstorming rules and write down every idea

3. When ideas run out, give time for continued thinking

4. Discuss each idea generated

5. Prioritize ideas

Interface Analysis

This is the process of identifying the potential user interfaces, system interfaces, and hardware interfaces within the scope of the project. This technique is most applicable to software solutions, where it is critically important to know the number of interfaces that must be addressed by the solution.

- User Interfaces – User using the software application

- System Interface – External Link between software applications

- Hardware Interface – Hardware connected to system (printers, mobile devices, servers)

The standard method of identifying interfaces is working with the Solution Architect with developing their System Context Diagram.

Prototyping

During Elicitation, this technique is used to discover and visualize high level user interface requirements, and confirm the business process as a whole.

Three types of Prototyping:

1. Throw Away – Prototype which is put together relatively quickly. Can be done with paper and pencil.

2. Evolutionary – Prototype is usually done by a developer using specialized tools and may become the actual software solution

3. Simulation Prototype – A hybrid of the Throw Away prototype and Evolutionary prototype

Advantages: Gives users something tangible to review, can speed up project lifecycle

Disadvantages: SMEs think the software can be developed as fast as the prototype, SMEs get caught up in the aesthetics.

Reverse Engineering

Review software components like code and databases to determine how the software is currently supporting the business process.

Benefits for Reverse Engineering include:

- Identifying changes to existing software

- Software documentation is out of date

- Business users may not be aware of the business rules being enforced

- Business users aren't sure how calculations are performed in the existing system

- Information stored in an existing system needs to be used by another application and it is not known which data elements are correct

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Sample Elicitation Questions

New Solution

Determine Business Objectives

- What are your goals in delivering this solution?
- What is the most important business goal of the solution?
- Will the solution change the way you are doing things now?
- Will the solution help you be more efficient? How?
- What will the new solution accomplish that is not currently accomplished manually or with other systems?
- What will the new solution do?

Determine Future Needs

- What business requirements will this solution address?
- What information do you need that you don't have now?
- Is any of this data currently captured in any other corporate system?
- How would you like to see this information?
- What functionality do you need from the solution?
- Are the data and/or functionality shared by other (many) business areas? If so, which?
- Which reports do you currently use? What data on the report is important?
- How do you use the information?
- If the reports were dynamic, what would they do differently?
- How much historical information is required?

Determine System Users

- Who will be using the system?
- What are the titles and roles of the people who will use the system?
- What are their levels of expertise?

Determine Current Problems

- What are the current problems you face without the solution today?
- What problems should this solution solve?
- Do you have to do things manually that you would be able to automate?
- Do you have performance problems that need to be resolved?
- Do you have functional limitations you would like to resolve?
- Are there specific bottlenecks to getting at information?
- How do you analyze the information you currently receive?
- What type of data is used?
- How do you currently get the data? How often do you get new data?
- What type of ad hoc analysis do you typically perform? Who requests ad hoc information? What do you do with the information?

Determine Criteria for Success

- What is most important for success of the solution?
- How would you measure success?

- What do we need to accomplish to make this project successful?
- What do we need to change to make this project successful?
- What buy-in do we need?
- Are we lacking any critical elements such as budget, resource allocation, or support?
- What are training considerations for developers and users?

Enhanced Solution

Determine Business Objectives

- Is this an interim change? If so, when does it begin and end? Can it begin/end at various times?
- Why do you want to redo the system?
- How will the new version of the system help you?
- What are your objectives in having this enhancement?
- Who are the key stakeholders and users? Do their goals differ? If so, how?
- How does the system map to business goals?
- What is the most important business goal of the system?
- Will the enhancement change the way you are doing things now?
- Will the enhancement help you be more efficient? How?
- What will the enhancement accomplish that the current system cannot?
- Will the output of the converted system be the same or different from the current system?
- Are you adding functionality? What?
- Will there be better performance? To what extent?
- Will the screens look different? How?
- What is most important (rank in order of importance)?
  - Application is easier to use.
  - Application has a nicer front end.
  - Application has additional functionality (list).
  - Application is more efficient.
  - Application is redesigned to better reflect the business

Determine Future Needs

- What business requirements will this enhancement address?
- What information do you need that you don't have now?
- Is any of this data currently captured in any other corporate system?
- How would you like to see this information?
- What new functionality do you need from the system?
- Are the data and/or functionality shared by other (many) business areas? If so, which?
- Which reports do you currently use? What data on the report is important?
- How do you use the information?
- If the reports were dynamic, what would they do differently?
- How much historical information is required?

Determine System Users

- Who will be using the system?
- What are the titles and roles of the people who will use the system?
- What are their levels of expertise?

Determine Current Problems

- What are the current problems you face with the system today?
- What problems do you need to solve?
- Do you have to do things manually that you need to automate?
- Do you have performance problems that need to be resolved?
- Do you have functional limitations you would like to resolve?
- Are there specific bottlenecks to getting at information?
- How do you analyze the information you currently receive?
- What type of data is used?
- How do you currently get the data? How often do you get new data?
- What type of ad hoc analysis do you typically perform? Who requests ad hoc information? What do you do with the information?
- Who are the most important players in terms of knowledge? Influence?
- Is there any existing system documentation? If so, where?
- Who else should we talk to?
- What is the risk of not converting the system?

Determine Criteria for Success

- What is most important for success of the application?
- How would you measure success?
- What do we need to accomplish to make this project successful?
- What do we need to change to make this project successful?
- What buy-in do we need?
- Are we lacking any critical elements such as budget, resource allocation, or support?
- What are training considerations for developers and users?

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Use Case and User Story Guideline

Overview

This guideline provides an overview of use cases, use case diagrams, and user stories. Use cases, use case diagrams, and user stories describe the interaction between an actor (which can be an end user or an interfacing system) and the solution that is being delivered by a project.

Use Case

A use case describes the action or event steps that are required to meet a business need. These steps define the interactions between a role (called an *actor*) and a system. Use cases are typically used in waterfall and iterative projects. Although use cases are an optional deliverable for IT projects, they provide additional clarity into the project's requirements for both the business and IT project team members. Use cases also are also helpful in developing test scripts as they list the steps needed to meet a business need.

Use Case Template

Use Case Attributes

Use cases typically include the following information:

Unique Identifier	A number that is used to uniquely identify the use case.
Name	The name of the action, task, or event in which the use case is representing. Note: use case names are written in "verb + subject" format.
Description	Briefly describes what an actor would use the use case for. It should reflect the role and purpose of the use case.
Actor	Specifies a role played by an end user or any other system that interacts with the subject. The actor can be a human, an external system, or other subjects. Note: that an actor does not necessarily represent a specific physical entity but merely a particular facet (i.e., "role") of some entity that is relevant to the specification of its associated use cases
Precondition	Conditions that must be set prior to the start of the procedure/steps/flow of events of a use case.
Post-Condition	Conditions that must be set after the procedure/steps/flow of events of a use case are completed.
Trigger	What action or event triggers the use case?
Basic Flow	The main procedure/steps/flow of actions or events that the actor(s) perform to complete the task expressed in the use case.
Special Requirements *(optional)*	Requirements that are needed for the completion of the use case that are not explicitly covered by the flow of events.
Alternate Flow *(optional)*	The alternate procedure/steps/flow of actions or events that the actor(s) perform to complete the task expressed in the use case, if applicable.
Exception Flow *(optional)*	The procedure/steps/flow of actions or events that the actor(s) perform when there is an error or exception to the basic or alternate flow.

Example:

Unique Identifier	UC0001
Name	Order Coffee Through Website
Description	A coffee drinker wants to order a cup of coffee. The coffee shop has online ordering available through its website.
Actor	Coffee Drinker
Precondition	Coffee shop's online ordering website is available.
Post Condition	An order for a cup of coffee is placed by the Coffee Drinker through the coffee shop's online ordering website.
Trigger	Coffee Drinker is thirsty.
Basic Flow	1. Coffee Drinker opens browser on personal computer. 2. Coffee Drinker navigates to coffee shop's website. 3. Coffee Drinker views drink menu options. 4. Coffee Drinker selects a cup of coffee. 5. Coffee Drinker submits order. 6. Coffee Drinker pays for order. 7. Coffee Drinker closes browser on personal computer.
Special Requirements *(optional)*	The coffee shop must be located within a five minute drive of the Coffee Drinker's current location.
Exception Flow *(optional)*	Not applicable
Alternate Flow *(optional)*	

Use Case Diagrams

Use case diagrams are a graphical representation of use cases. Use case diagrams enhance use cases by providing a picture of the flow of actions/events, which may be more easily understood by the subject matter experts on the project. Use case diagrams may be used in waterfall, iterative, and agile projects.

Example: A coffee drinker wants to order a cup of coffee. The use case diagram below shows possible use cases for completing this action.

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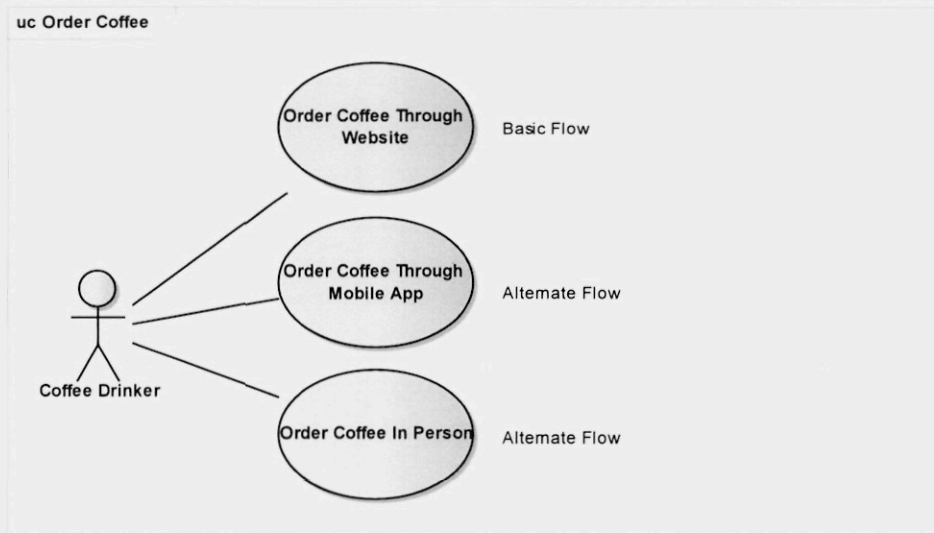
Use Case Diagram Elements
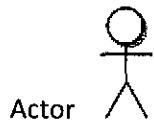
Actor

Use case   *Note: use case names are written in "verb + subject" format.*

The relationship between the actor and the use case is depicted by drawing a line between them.

Special types of relationships include:

Extends – Adds steps to another use case

Invokes – On use case causes another use case to happen

Includes –Includes steps from one use case into another use case

Precedes – One use case must occur before another use case
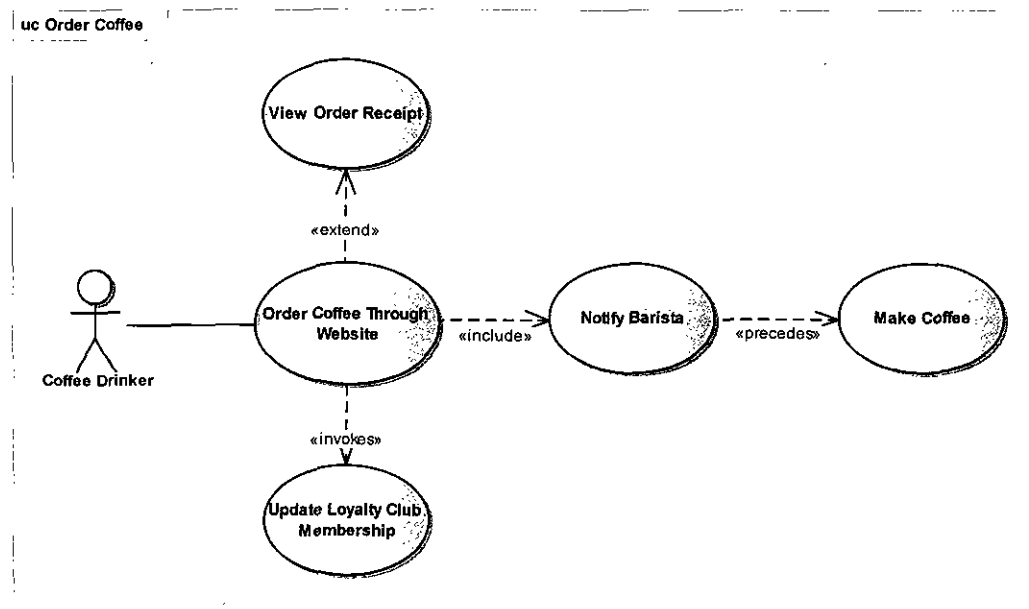
User Story

Note: Additional information regarding user stories may be added at a later date.

User stories (also called user scenarios) are a statement of an end user need. They are used in Agile development projects to describe system features from an end user perspective. They are often used as a simplified replacement to traditional requirements. User stories are simple statements that have three parts:

1. Describe the end user.
2. Describe the end user's goal.
3. Describe the benefit the end user will gain when the goal is met.

The general format for the user story is:

As a *<role>*, I want *<goal/desire>* so that *<benefit>*.

Example: As a Coffee Drinker I want to order a cup of coffee online so that I do not have to stand in line at the coffee shop.

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Guideline to BPMN

Overview

Business Process Model and Notation (BPMN) is the standard for business process modeling that provides a graphical notation for specifying business processes in a Business Process Diagram (BPD) based on a flowcharting technique.

To support consistency across IT Applications projects, this document will outline the Visio template and shapes that should be used when creating a BPD using BPMN.

Additional guidance on Business Process Modeling may be provided in the future.

Visio

Cross-Functional Flowchart Template

Utilize the built-in Visio template "Cross-Functional Flowchart".
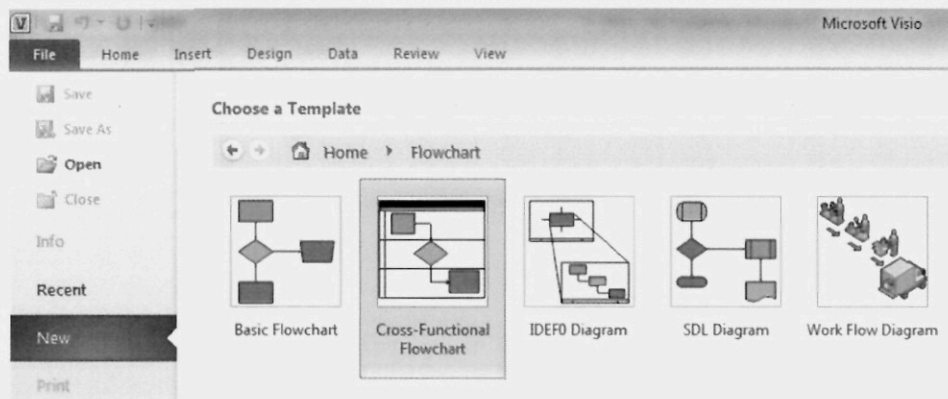
Visio will create a new document that includes a couple of empty swim lanes by default.
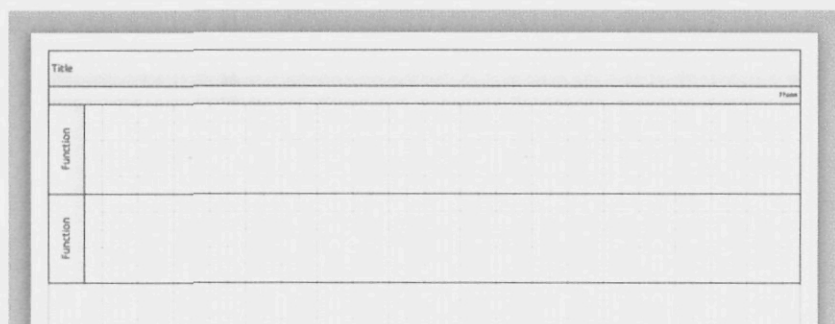
Shapes

Make use of the two default categories of shapes provided with this template.

Basic Flowchart Shapes

Shapes	‹
More Shapes	▶
Quick Shapes	
Basic Flowchart Shapes (US units)	
Cross-Functional Flowchart Shapes (US units)	

Basic Flowchart Shapes (US units)

Process	Decision
Subprocess	Start/End
Document	Data
Database	External Data
Custom 1	Custom 2
Custom 3	Custom 4
On-page reference	Off-page reference

Cross-Functional Flowchart Shapes

Shapes	‹
More Shapes	▶
Quick Shapes	
Basic Flowchart Shapes (US units)	
Cross-Functional Flowchart Shapes (US units)	

Cross-Functional Flowchart Shapes (US...

Swimlane	Separator
Swimlane (vertical)	Separator (vertical)

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Requirements Prioritization Guideline

Overview

This guideline outlines techniques that can be used to guide Functional and Technical SMEs and Approvers through the process of prioritizing requirements. Determining the priority of requirements can help·you identify which requirements need to be analyzed further or implemented first. Prioritization helps to focus business analysis activities. It ensures that the analysis and implementation processes are focused on the most critical requirements.

Weighting Requirements

With any prioritization technique, it is good practice to combine several criteria to weight the requirements. This provides a structured framework for determining which requirement is more important than another. The criteria for weighting requirements is determined by the stakeholders involved and will depend on the project / organizational need.

There are several criteria that can be used to weight requirements:

Criteria	Description	Usage
Business Value	Analyzes the cost of requirements in order to determine their value to the organization. The more valuable a requirement is, then the sooner its implementation should occur.	This approach is most used when enhancing an existing solution that meets only minimal requirements or the solution is delivered incrementally.
Business or Technical Risk	Examines the risk that each requirement presents. Because there is always risk that requirements and projects might fail, this involves determining which requirements present the highest risk so that these can be implemented first.	By implementing the riskiest requirements first, you can ensure that if problems are encountered, they occur before a considerable amount of investment has been made.
Implementation Difficulty	Involves prioritizing the requirements that are easiest to implement.	Often used during the pilot of a new development process or tool and when generating a packaged solution. Helps to gain familiarity with a new tool, process, or packaged solution, while working with lower-risk requirements.
Likelihood of Success	Involves prioritizing requirements that are most likely, and almost certain to be successful quickly.	Often used during controversial projects or when early successes will help gain support for an initiative.
Regulatory or Policy Compliance	Involves prioritizing requirements that are necessary in order to meet regulations and policy demand imposed on an organization.	When certain regulatory or policy requirements need to take precedence over other stakeholder and SME interests.

Relationship to Other Requirements	Involves examining requirements to determine their value. While certain requirements might not be valuable at first glance, they might provide support for other more important requirements.	Identifies these requirements and determines whether their support value could make them suitable for early implementation.
Stakeholder Agreement	Requires stakeholders and SMEs to determine and agree upon the value or usefulness of requirements.	This is often achieved through a combination of one or more other approaches.
Urgency	Concerned with the time sensitivity of a requirement. The sooner a requirement must be met, the higher its priority	

Requirement Prioritization Techniques

This section describes five different requirements prioritization techniques / approaches. The weight that a requirement has been assigned for each of the chosen criteria is useful in the prioritization process using these techniques.

MoSCoW Analysis

In MoSCoW Analysis, requirements are assigned to one of the following categories. This is one of the most popular and simplest prioritization techniques to use.

> ➤ **Must** – Non-negotiable, essential to project success

> ➤ Should – High priority but not absolutely essential to the success of a project. Often critical to the success but can be satisfied in other ways if need be. The project should try to deliver as many "should" requirements as possible.

> ➤ Could – Desirable but not absolutely necessary because they don't affect overall project success. They are implemented only if they won't cause adverse effects and as long as resource constraints permit.

> ➤ Won't – Those that Stakeholders and SMEs have agreed won't be implemented and could be considered for implementation at a future date

Time Boxing/Budgeting

This approach is used to prioritize requirements when you've already decided on a solution approach and requirements that are to be investigated based on a fixed resource, such as time or money, which has already been allocated to a project

> ➤ **All In** – Start with a list of all eligible requirements that have been given a duration and cost limit, then remove requirements one by one until you meet the project's calendar or budget limit

> **All Out** – Start by adding the eligible requirements one by one and when the ones added reach the assigned calendar duration or budget cost, stop.

> **Selective** – Start by identifying the requirements added to the calendar or budget that have the highest priority and then add and remove requirements according to priority, until you meet your specified calendar date or budget limit

Voting

Prioritizes requirements according to the number of votes they receive. The more votes, the higher its priority and the sooner it should be developed and implemented.

- Requires the services of several participants who act as voters and each participant is assigned a specific number of votes, which they in turn distribute among the applicable requirements according to their level of importance or influence.
- Votes that are allocated might be tokens or play money and each vote is representative of a fixed amount of resources.
- Once voting is complete, the requirements with the most resources are developed and implemented first.

Decision Analysis

Helps to make an optimal decision by determining what the possible consequences of making a particular decision are.

- Can be used to identify high-value requirements
- Used during difficult, complex, and uncertain situations

Risk Analysis

Identifies and manages areas of uncertainty that might impact the project. Involves implementing the riskiest requirements first so that if the project fails, the investment amount is mitigated.

- May use when a project is initiated by an organization that is concerned with the possibility of failure.
- To use this approach, you should understand the organization risk tolerance levels, assess possible risks, and then identify responses.

Requirements Metrics Guideline

Overview

This guideline outlines the required and recommended metrics for requirements development and management. This includes the metric purpose, calculation and visibility method, and examples of basic tracking mechanisms.

Required Requirement Metrics

Metric/KPI	Purpose	Method to Calculate/Track	Where / How to Document Metric
• Total # of Requirements • % of Requirements Approved By Business	Provides an indication of the completeness and quality of requirements prior to Commit gate review/approval and the transition from Analyze to Design phase.	Manual	Stage Gate Checklist Review at Commit Gate
• # of Requirement Related Defects	Provides an indication of the quality of requirements. Requirements defects examples include, but not limited to: 1) Ambiguous, more than one interpretation 2) Not testable 3) Too high level, more details needed 4) Multiple requirements (in one) 5) Conflicts with another requirement 6) Other issues discovered using the Requirements Peer Review Checklist	Manual or Quality Center	IT PMO Status Report (Additional Project Status Information section)

Tracking Mechanism

The following examples provide a potential method for capturing and reporting the required metrics defined above.

Requirements Peer Reviews & Approvals

Reporting Date	Total # of Requirements	Commit Gate		
		Peer Review	Approved	
		Y/N	#	%
mm/dd/yyyy	500	Yes	490	98%
mm/dd/yyyy	500	Yes	495	99%
mm/dd/yyyy	500	Yes	500	100%

Requirements Defects

Reporting Date	# of Approved REQs	# of Requirements Defects	% of Approved Total - Open	% of Approved Total - Closed
mm/dd/yyyy	500	30	6%	0%
mm/dd/yyyy	500	15	3%	3%
mm/dd/yyyy	500	10	2%	4%
mm/dd/yyyy	500	5	1%	5%
mm/dd/yyyy	500	0	0%	6%

Recommended Requirement Metrics

Metrics in this section are recommended, but are at the discretion of the Delivery Manager.

Metric/KPI	Purpose	Method to Calculate/Track	Where / How to Document Metric
• # and % of Requirements Changed After Sign-Off / Commit Gate (Added, Deleted, Modified)	Provides an indication of frequency of change and stability of requirements and potential for changes that may impact scope, schedule, or cost.	Manual (Future implementation of an enterprise requirements tool may assist with being able to calculate/track this metric)	IT PMO StatusReport (Additional Project Status Information section)

Tracking Mechanism

How a project will track modified, added and deleted requirements is to be determined by the Project Manager and Lead Business Analyst and defined in the Metrics section of the Requirements Approach.

The following example provides a potential method for capturing and reporting the recommended metrics defined above.

Requirements Approvals & Changes (After Sign-Off)

Reporting Date	Total # of Requirements	Commit Gate			Post Commit Gate / Sign-off					
		Peer Review	Approved		Modified		Added		Deleted	
		Y/N	#	%	#	%	#	%	#	%
mm/dd/yyyy	500	Yes	490	98%						
mm/dd/yyyy	500	Yes	495	99%						
mm/dd/yyyy	500	Yes	500	100%						

Requirements Traceability Guideline

Overview

This guideline outlines the best practices for establishing requirements traceability through the Solution Delivery Life Cycle (SDLC), including Analyze, Design, Build, and Test phases. Additionally it covers how to apply traceability in the currently utilized requirements tools and applications.

Requirements Traceability Scope

Requirements Traceability is sometimes thought of as linking requirements to test cases/scripts in Quality Center/HP ALM (HPQC) to ensure testing coverage of those requirements. However, that is only a piece of the entire traceability puzzle. The best practice is to trace (or map/link) requirements throughout the entire SDLC. By following traceability throughout the SDLC, when a defect is discovered during testing it becomes an easy exercise to determine the full impact by back tracing to the Code Modules, Designs, Processes, User Scenarios/Use Cases, and Requirements.

The following provides information on the types of tracing that could be implemented in each phase of the project lifecycle.

Analyze Phase

- High Level Requirements tracing to Detailed Requirements
- Detailed Requirements tracing to User Scenarios/Use Cases
- Detailed Requirements tracing to Business (and/or IT) Process
- Detailed Requirement tracing to RICEFW Inventory (Optional)

Design Phase (Optional)

- Detailed Requirement tracing to Functional Designs
- Detailed Requirement tracing to Technical Designs

Build Phase (Optional)

- Detailed Requirement tracing to Code Module (or Component)

Testing Phase

- Detailed Requirement tracing Product Test Scripts
- Detailed Requirement tracing Performance Test Scripts
- Detailed Requirement tracing User Acceptance Test (UAT) Scripts

Tool Guidelines for Traceability

Provided below is additional guideline information on how to establish and maintain Requirements Traceability using the primary requirements tools currently used at Duke Energy.

IT PMO PL101

The most up-to-date version of the IT PMO PL101 template includes dedicated sections for traceability. If you are using this tool for Requirements Management, complete each section indicated below during the appropriate phase in the SDLC. This is the responsibility of the project's Lead Business Analyst or whomever the Project Manager assigns to establish and maintain the Requirements Traceability.

Required Fields in Red if uploading to EQC	Approval		Traceability Matrix								
			Analyze		Design		Build	Test			
Requirement Name	Approver Name	Date Approved	Use Case-Scenario Ref	Bus Process Ref	Fcnal Design Ref	Tech Design Ref	Code Module Ref	Product Test Script	Performance Test Script	UAT Script
Requirement 1										
Requirement 2										
Requirement 3										

HPQC/HP ALM (Quality Center)

If you are using the HPQC application for Requirements Management, the process of defining traceability is similar to that of the IT PMO PL101. However, it requires the Traceability Matrix fields (purple cells in the PL101 spreadsheet image above) to be created as "User Defined Fields" within HPQC. This can only be achieved if the project has a dedicated HPQC Project set up for its use and an experienced HPQC Administrator familiar with adding and using User Defined Fields. In the absence of an experienced HPQC Business Analyst with these permissions, it is recommended to utilize the IT PMO PL101 to maintain traceability.

Traceability to Test Cases

Once test cases have been created in or uploaded to HPQC, work with Test Lead(s) and/or Testers to link each requirement to the appropriate Product Test Case, Performance Test Case, and UAT Script.
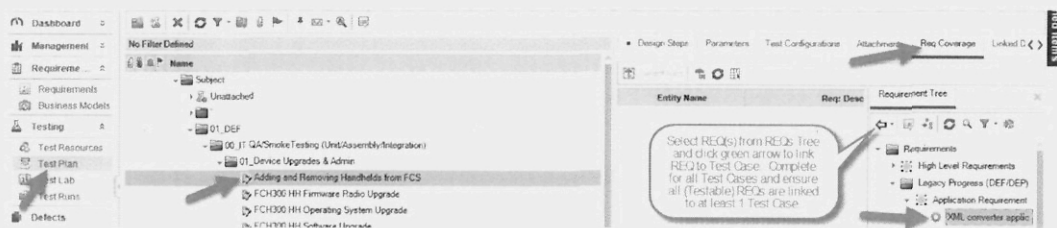
Traceability to Work Products

There are two options to consider when using HP ALM for establishing Requirements Traceability to various work products. These are explored in detail below.

Requirement Traceability Feature

Traceability can be established by utilizing the Requirements Details view and the Traceability feature.

1. Ensure Requirement Types for Use Case-Scenario, Business/IT Process, Design, and Code Module exist in HPQC.

2. Create the inventory of Use Case-Scenarios, Business/IT Process, Functional Designs, Technical Designs, and Code Modules in HPQC.
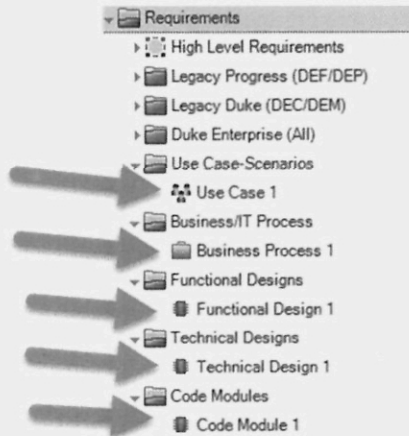
3. Use the Attachment feature in HPQC to link to the deliverable on SharePoint and/or upload the final approved document.
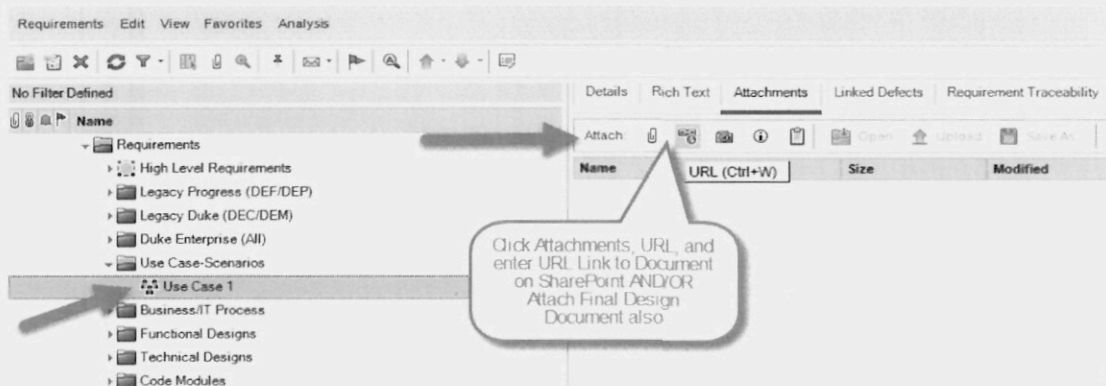
4. Click on a Requirement then select the Requirements Traceability tab. Select 'Add Requirement Traceability → From Requirements Tree'.
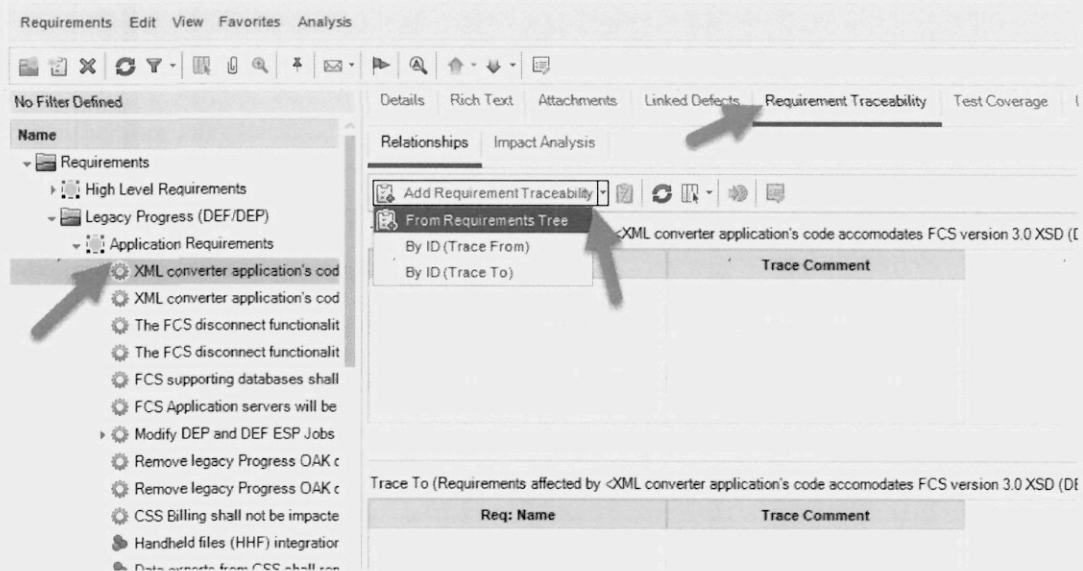
5. Select the applicable work products from the Requirements Tree and click the green arrow to Add Traceability.
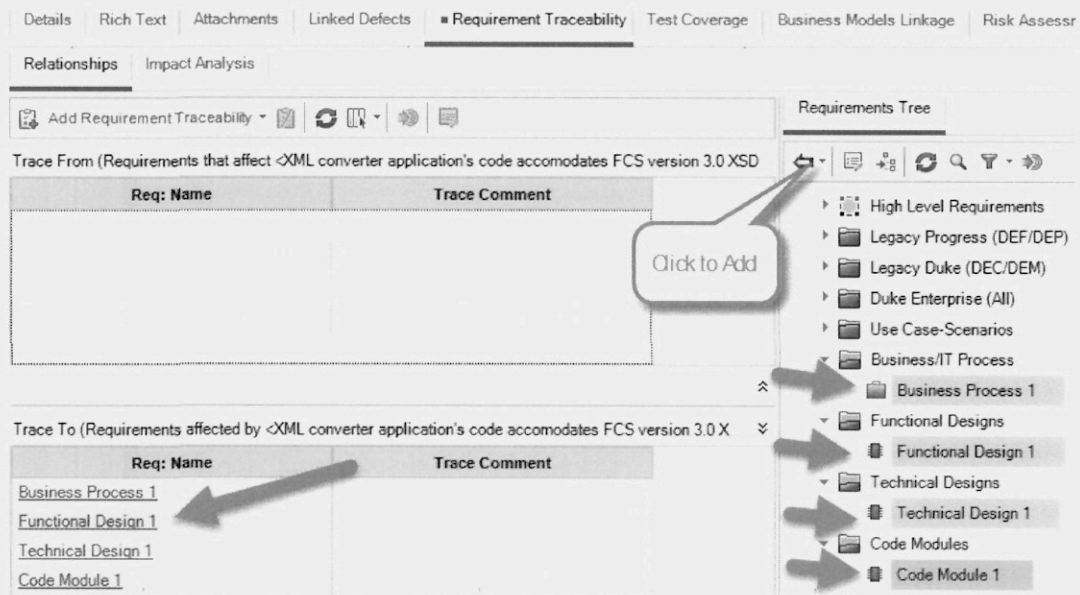
User Defined Fields & IT PMO PL101 View

Traceability can be established by utilizing User Defined Fields for Fit/Gap Analysis and Traceability and building an IT PMO PL101 View.

Note: Utilizing the "Customize" option to add User Defined Fields requires appropriate permissions in HPQC Project. The TDAdmin role provides full rights to add/modify/delete.

1. Select *Customize*
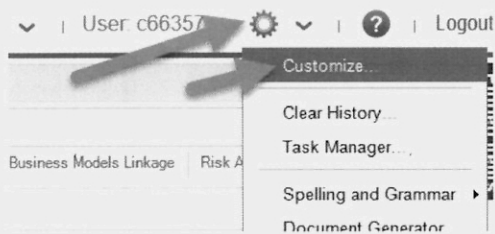
2. Add the User Defined Fields needed as defined in the IT PMO PL101 Fit/Gap and Traceability Matrix

IT PMO PL101 Traceability Matrix

3. Build an IT PMO PL101 view in HPQC and complete the Fit/Gap Analysis and Traceability Matrix (user defined) fields
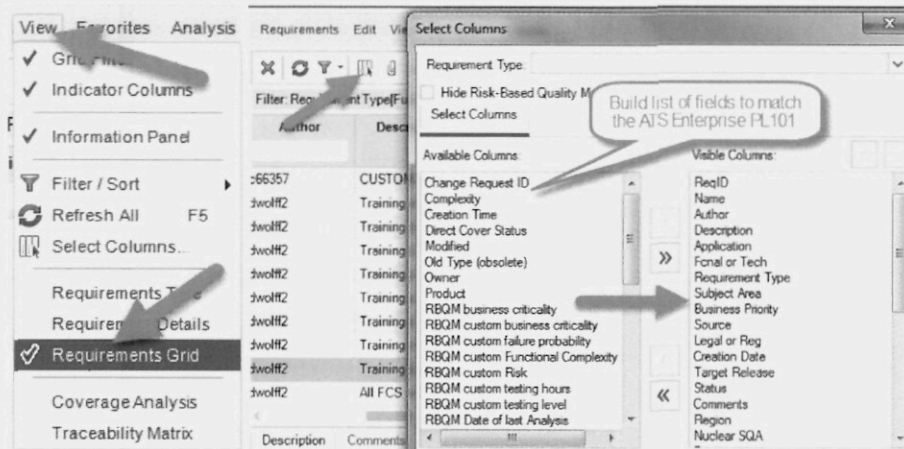
4. Save the IT PMO PL101 View in Favorites
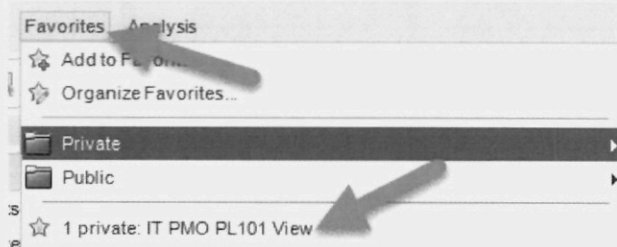
5. For each Requirement, complete the Fit/Gap Analysis using the appropriate fields

Fit/Gap	Gap Resolution Type	Resolution Description	Resolution Confirmed	Resolution Assigned To	Duke or Vendor	Fit/Gap Comments	Approver Name	Date Approved
Fit								

6. For each Requirement, complete the Traceability using the appropriate fields

Use Case-Scenario Ref	Business/IT Process Ref	Functional Design Ref	Technical Design Ref	Code Module Ref
		---		---

Requirements Review & Sign-off Guideline

Overview

The Review and Sign-off Guideline provides best practice guidance on how to achieve a formal review and sign-off on the requirements. These guidelines apply to all requirements, including but not limited to functional and non-functional requirements.

Roles & Responsibilities

In general, most Project Leads should be involved in the development, review, and approval of Requirements. The project's Lead Business Analyst is responsible for leading and driving the Review and Signoff process. *Business and IT Sponsors are optional and at their discretion.*

Requirements Approver(s) should be identified in the Project Charter and Requirements Approach and be responsible for reviewing and approving the requirements. Ensure each requirement has at least 1 assigned Approver (in the requirements tool/application) and any additional resources needed for review are allocated and available. Depending on the size and complexity of the project you may have one or more Reviewers and/or Approvers.

Requirements Peer Review

Conducting a Peer Review validates that the requirements are complete, consistent, organized logically, and are clear to any reader. Prior to review and sign-off of requirements, a Peer Review of the requirements should be executed using the Requirements Peer Review Checklist. The 'Peer Reviewers' are assigned by the Project Manager(s) and Business Analyst(s) and are typically members of the core team. Ideally they are experienced BAs or Tech Leads.

In addition, the Business Analyst should ensure that IT stakeholders, including the IT Project Manager, have reviewed the requirements prior to review and sign-off.

Peer Review Approach

The approach to executing Peer Review(s) should be defined in the Requirements Approach document for the project.

Consider the scope and timing of conducting Requirements Peer Reviews. It may make sense to set the timing and approach of Peer Reviews similarly to that of the Approver/SME Sign-off Reviews. See the Sign-off Review Section.

Requirements Defects

If the project opts to log defects for requirements in the Analyze Phase as part of the Peer Review process, the Lead Business Analyst should resolve and close the requirements defect(s) before the final set of Approved, Commit Gate ready requirements are considered complete.

Sign-Off Review

The approach to executing Sign-Off Review(s) and obtaining sign-off should be defined in the Requirements Approach document for the project.

Consider how requirements should be communicated / reviewed for the sake of getting meaningful, targeted feedback that will make your projects more successful.

Review Methods

1. Formal Workshop (in-person or video conference)
2. Formal Conference Call with Screen Share
3. Informal Email Notification and Independently Reviewed

Audience Considerations

One or more of the below may apply based on project needs.

- Create high-level documents, even slide decks for engaging presentations, for executive-level stakeholders
- Consider one-on-one meetings for important stakeholders at a higher-level that don't want / need the details.
- Make use of visuals such as Use Case Diagrams to talk through complex processes and Wireframes to simulate new software experiences.
- Compartmentalize the details that are important to each individual or functional group. Review separately, unless their concerns overlap and there is a need to facilitate collaboration.

Review Content

For reviewing detailed requirements, considering the following options:

- Segment requirements into categories for review & sign-off. Prepare the chosen requirements tool/application for review of each specific category of requirements. Categories may include by Application, by Function, by Process, by Owner, by Requirement Type, etc.

  This approach is recommended for large projects.

- Prepare the requirements tool/application for review of requirements and perform review of all requirements at the same time.

  This approach is recommended for small projects.

Review Timing

Consider the timing for when to conduct Review & Sign-Off. For example:

- When all requirements are complete
- Iterative, as each grouping of requirements is considered complete

Sign-Off

Electronic documentation of sign-off is required.

Email / Electronic

1. Send requirements via email to those responsible for sign-off, requesting sign-off documentation
   a. Ensure that you allow adequate time for them to respond.
   b. Place the deadline date in the subject line.
   c. Place a reminder for a specific number of days prior to the deadline.

2. Save approval emails to the appropriate SharePoint repository.

Final Steps

Once review and sign-off has been completed, remember to update the status of the requirements in the appropriate tool/application to 'Approved'.

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Guideline for Managing Changes to Requirements

Overview

This guideline outlines the recommended process for managing changes to requirements after sign-off and the Commit Gate. All requirements changes should be assessed for impact and handled appropriately based on their level of impact.

<u>Requirements Change:</u> A change to an existing requirement, the removal of an existing requirement or the addition of a new requirement. The term "change" in this guideline refers to any of these types of requirements changes.

Assess Impact to Project Constraints

The Business Analyst should collaborate with the Project Manager and other appropriate resources to assess project impacts as it relates to requirements changes. Project Managers are ultimately responsible for ensuring that impacts to project scope, schedule, or cost are assessed and handled appropriately and for submitting any necessary Change Requests following the <u>IT PMO Change Request Guidelines</u>.

For significant changes, some Business Analysts use the <u>Requirements Change Control Summary</u> to describe the change and estimated impact to all work streams (Design, Testing, Process, Deployment, Training, Change Mgmt, etc.).

Managing Requirements Changes

Below are some recommended steps for managing changes to requirements after sign-off / Commit Gate. Follow these steps to ensure all changes are tracked and communicated to the team:

1. Make the requirement change in the Requirements Tool / Template and log a comment as to the reason for the change. Include CR# if appropriate (PM can provide CR#).

2. If tracking *# and % of Requirements that have Changed After Sign-Off*, then log the data as needed to report the metric.

3. Communicate the change via email to all project resources.

4. Ensure the change is accounted for in the testing tool by working with the Test Lead(s) and/or Testers (whoever is responsible for ensuring testing coverage and traceability).

5. Ensure the change is accounted for in any relevant Design Documents by working with the Technical Lead(s) and/or Designers and Developers.

6. Ensure the change is accounted for in any Process Models and/or Standard Operating Procedures (SOPs) by working with the resource(s) responsible for creating and maintaining Business and IT Process Models/Maps).

7. Ensure the change is accounted for in the Organizational Change Management Plan (if applicable) by working with the Change Management Lead.

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<Project Name>

Requirements Approach

This deliverable should be completed during the early part of the Plan phase. The purpose is to provide planning for the project's Requirements Management Lifecycle including, but not limited to, requirements development, review and signoff, managing changes, and final transition to production support. The project's Lead Business Analyst is responsible for creating this document and the Project Manager is responsible for review and approval.

Table of Contents

1 REQUIREMENTS APPROACH OVERVIEW

Briefly describe the project's overall scope and how the requirements workstream will achieve project goals.

1.1 Requirements Deliverables Scope

Clearly identify the in-scope and out of scope activities for this project's requirements workstream and define dependencies on any other project and/or Operations resources and assigned activities. Are there iterative components of the project, strictly waterfall, or a hybrid delivery?

Requirements Deliverables Scope

Instructions:

In collaboration with Business/Technical SMEs, Technical Lead, and Project Manager:

1. Perform analysis to determine and indicate which deliverables / requirements management activities will be in scope for the project.
2. Determine which Tool / Template / Mechanism will be used to deliver each item. Suggestions are provided.
3. Append additional items to this list as needed.

ID	Deliverable / Activity Description	In Scope?	Tool / Template / Mechanism for Delivery (Suggestions in parentheses)
1	High-Level Requirements	Yes/ No	*(ITDM PL101, EA, HPQC)*
2	Plan/Schedule (including time/resource estimates)	Yes / No	*(Excel, MS Project)*
3	User Scenarios/Use Cases/User Stories	Yes / No	*(ITDM AP235)*
4	Current Capabilities Assessment	Yes / No	*(ITDM SP044)*
5	Business/IT Process Design	Yes / No	*(ITDM BP310)*
6	Detailed Requirements	Yes / No	*(ITDM PL101, EA, HPQC)*
7	Fit/Gap Analysis	Yes / No	*(ITDM AP21, EA, HPQC)*
8	Traceability to User Scenario/Use Case	Yes / No	*(ITDM PL101, EA, HPQC)*
9	Traceability to Business/IT Process	Yes / No	*(ITDM PL101, EA, HPQC)*
10	Traceability to Functional Designs	Yes / No	*(ITDM PL101, EA, HPQC)*
11	Traceability to Technical Designs	Yes / No	*(ITDM PL101, EA, HPQC)*
12	Traceability to Code Modules	Yes / No	*(ITDM PL101, EA, HPQC)*
13	Traceability to Test Scripts	Yes / No	*(HPQC)*
14	Others as determined by Lead BA and PM	Yes / No	*(To be defined by BA/PM)*

1.2 Requirements Organization

Define the requirements organization approach and how they will be managed in the PL101, HPQC, or EA. Define the requirements types that will be addressed by the requirements workstream. Requirement types can include High-level, Functional, Application, Reporting, Data/Interface, Quality, and a variety of Non-Functional types. Will a folder hierarchy be utilized in EA or HPQC? Will a specific numbering scheme be used in the IT PMO PL101?

Below are 2 examples of how requirements might be organized in a folder hierarchy type of organization using EA or HPQC. The first is Process and User Scenario/Use Case centric. The second is Application and Function centric. These do not include the Non-Functional Requirements which are typically organized by Function/Topic.

Work Product	AppDev Question it Answers		
User Scenario/Use Case	Who	What	Why
Business, Functional, Detailed Requirements	Where	What	When

1 Business Process: Many User Scenarios/Use Cases. Requirements are then inherently grouped/traced to a Process

Function, Application and other key data captured in Requirements Mgmt Tool.

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Work Product	AppDev Question it Answers		
User Scenario/Use Case	Who	What	Why
Business, Functional, Detailed Requirements	Where	What	When

1 Function: Many User Scenarios/Use Cases. Requirements are then inherently grouped/traced to a User Scenario and Function

Process tracing and other key data captured in Requirements Mgmt Tool.

Since Non-Functional Requirements cannot typically be organized into a sequential, process and user scenario based organizational structure, it is recommended to organize by Function/Topic. See below for Non-Functional Requirements guidance and considerations.

Non-Functional Requirements Checklist

2 REQUIREMENTS DEVELOPMENT

Describe the requirements elicitation techniques that will be utilized to develop requirements for the project. Will there be processes, use scenarios/use cases, and/or requirements workshops? Do requirements already exist from historical projects and can those be leveraged? Is this a vendor/packaged solution and are there release notes from which to develop requirements? Does historical design documentation exist that can be leveraged?

3 REQUIREMENTS RESOURCES

Define the resources needed for the requirements workstream and identify their roles and responsibilities. If training is required, identify what training is required and which resources require it.

3.1 Requirements Resources, Roles and Responsibilities

List roles and responsibilities for each resource required to complete the requirements activities outlined in the Requirement Planning Worksheet.

3.2 Requirements Training

List any training that may be required for resources involved in the requirements workstream activities (i.e. EA, HPQC, PL101 training).

4 REQUIREMENTS PLANNING

Define the detailed activities, estimated work effort, and responsible or assigned resources needed to complete all the requirements development activities.

4.1 Requirements Workstream Planning Worksheet

Below is a sample of activities that can be used for requirements planning and estimation:

<<Project Name>>
Requirements Workstream Planning Worksheet

Instructions:
1. In collaboration with Business/Technical SMEs, Technical Lead, and Project Manager, perform analysis to determine which of the below activities are needed for the project
2. Work with PM to fill out the "Estimated Time for Activity" column in either duration or actual effort and determine if all activities below or only milestones of the below activities will be included in the Project Manager's master schedule
3. Fill out the "Other Resources Required" column. This will help the PM better estimate the true requirements effort as well as provide for resource planning of any working sessions for development, reviews, and/or signoff.
4. Create and add requirements workstream milestones as needed for a more high level tracking and reporting mechanism

ID	Activity Description	Responsible	Estimate Time for Activity	Project WBS	Other Resources Required
1	Project Setup in Requirements Management tool/application	BA/RA		Analysis	
2	Perform Current Capabilities Assessment	BA/RA		Analysis	
3	Plan and Schedule Requirements Sessions	BA/RA		Analysis	
4	Facilitate Requirements Sessions	BA/RA		Analysis	
5	Document current Business/IT Processes	BA/RA Or Process Designer		Analysis	
6	Document future Business/IT Processes	BA/RA Or Process Designer		Analysis	
7	Develop and document High Level Requirements in tool/application	BA/RA		Analysis	
8	Document Detailed Requirements in Requirements tool/application	BA/RA		Analysis	
9	Develop and document user scenarios/use cases and trace to Detailed Requirements	BA/RA		Analysis	
10	Establish traceability from High Level to Detailed REQs to User Scenario/Use Cases, to Functional + Technical Designs, + Code Modules	BA/RA		Analysis/ Design / Build	
11	Schedule Requirements review with IT & Business	BA/RA		Analysis	

12	Peer review of Requirements	BA/RA		Analysis	
13	Review Requirements with IT and Business	BA/RA		Analysis	
14	Modify Requirements (could be several iterations)	BA/RA		Analysis	
15	Obtain signoff of Requirements	BA/RA		Analysis	
16	Acquire Vendor documents (if applicable)	BA/RA		Analysis	
17	Create Requirements Traceability Matrix (RTM) and notify Test Analyst (TA)	BA/RA		Analysis & Design	
18	After TA has finished linking requirements to test scripts, create and review final RTM	BA/RA		Build / Test	
19	Modify Requirements through design/build/testing phases *only if approved via change management process	BA/RA		Test	
20	Assist in Defect Triage to ensure in scope	BA/RA		Test	
21	Ensure requirements are finalized and documented	BA/RA		Test	
22	Ensure RTM is finalized and documented	BA/RA		Test	
			0	Total Hours	
			0	No. Days	

5   REQUIREMENTS PEER & OWNERS REVIEWS

Define how the project will plan and execute Requirements Peer Reviews and Requirements Owners/Approver Reviews. Will they be performed iteratively by a defined requirements grouping as they are completed? Will they be performed after all requirements groupings are considered complete?

Before the Commit Gate, it is critical to include time in the Analyze plan/schedule to account for any changes following final Approver reviews.

Best practice guidance on how to achieve a formal review and sign-off on requirements is provided in the Requirements Review & Sign-off Guideline, located on the IT PMO SharePoint site.

6   REQUIREMENTS METRICS

Define how the project will log and track requirements metrics. Specify any recommended or desired metrics that will be included in addition to the required metrics.

Explain how requirement related defects will be resolved and in which phases of the delivery lifecycle (Analyze, Design, Build, Test) they will be tracked. The recommendation is to track defects on requirements after they are considered complete, as defined by the project.

Required and recommended requirements metrics are outlined in the Requirements Metrics Guideline, available on the IT PMO SharePoint site.

7 REQUIREMENTS CHANGE MANAGEMENT

Describe how requirements changes (modifications, additions and deletions) will be managed.

The Guideline For Managing Changes To Requirements is available on the IT PMO SharePoint site.

8 REQUIREMENTS TRANSITION TO SERVICE INTRODUCTION & PRODUCTION SUPPORT

Define how the project will transition approved and successfully tested requirements to Service Introduction and Production Support to ensure long term storage of the solution's requirements. This is a critical activity to ensure requirements are available for projects reuse.

9 REVISION HISTORY

Date	Version	Description	Author
<Date>	<Version #>	<Description>	<Name of Author>

<Project Name>
Requirements Template

Version: 1.0

The following template is provided for use with Requirements. The blue text provides guidance to the author, and it should be deleted before publishing the document.

See the Revision History table at the end of the document for revision status.

Requirements Traceability Matrix

Using the Requirements Traceability Matrix (RTM)

Click the button to perform the specified action.

| Determine Requirements | Enter High-level Requirements | Enter Product Requirements | Track Requirements | Record Updates to Requirements | Requirements Definitions and Categories |

Ensure that the RTM is placed under Version Control

* Refer to the Configuration Management (CM) Plan or Project Plan for more detailed information on Requirements Management. Ensure that the RTW is put under version control.

Name of Action	How to Perform Action	Related Field
Determine Requirements (High-level Requirements and Product Requirements Worksheets)	Use the project's Statement of Work (SOW) and/or High-level requirements gathering sessions to determine the requirements that the project is responsible for implementing. The types of requirements are shown in Figure 1 below.	Requirements Definitions and Categories
Enter High-level Requirements (High-level Requirements worksheet)	These are created in Plan stage. Enter the high-level requirements on the High-level Requirements worksheet. Complete the following steps for each high-level requirement:	
	Enter the Project Name. Use the official project title.	Go to Project Name
	Enter a **Project Stage**. This is to indicate the stage in the lifecycle where the tab is completed. Typical expecation should be: High Level Requirements - Stage = **Plan** Product Requirements - Stage = **Analyze** The RTM - Lifecycle Tracking tab should be updated as the project lifecycle stages change.	Go to Project Stage
	Enter a **High-level Requirement ID** using the project's standard. Enter each requirement on a new row.	Go to High-level Requirement ID
	Number High-level Requirements in whole numbers 1, 2, 3, ... and then number Product Requirements in such a way to establish bidirectional traceability (to easily trace back to high-level requirement and vice-versa). E.g. for a high-level requirement that is assigned number 3, the corresponding product requirements should be numbered as 3.1, 3.2, 3.3,... etc. For product requirement 3.1, more detailed product requirements may be numbered as 3.1.1, 3.1.2, etc.	

Last modified by: User

Enter a Business Topic using the project's standard. Refer to the TOC worksheet to find the Business Topic that is appropriate for each Requirement ID. Copy the Business Topic from the TOC worksheet to the Business Topic field on the High-level Requirements and the Product Requirements worksheets.
For example:

Requirement ID	Business Topic
1	Application Functionality
2	Customer Support
3	Usability

Continue numbering for other business topics (see TOC worksheet for details).

The project can modify the types of Requirement IDs that can be entered and the Business Topics that these requirements are mapped to by updating the TOC worksheet. To update the TOC worksheet, click on the TOC Worksheet hyperlink.

Enter a **High-level Requirement Name**.

Enter a **Short Description** of the requirement.

Enter the requirement **Priority**. This can be L, M, H, or C (Low, Medium, High, or Critical) Definitions are as follows:
Critical (C) - Can not live without
High (H) - Requirement is of high importance, but alternatives can be evaluated to meet the need
Medium (M) - Important – not critical but strongly desired by stakeholders
Low (L) - Optional – nice to have

Enter The **Release Number** that will include this high-level requirement.

Ensure that the RTM is put under version control so that older versions of requirements can be retrieved. Also, make updates as appropriate to Requirement Name, Short Description, and Long Description columns.

Enter a **Long Description** of the requirement.

Enter a **Requirement Source (if applicable)**
ex - enter "SOW" for a requirement that came from the Statement of Work
    enter "JAD Session - 11/20/2005" for a requirement that resulted from a specific "Joint Application Development" session

Enter the **Business/Process Area** to which the requirements belong to, such as Billing or Customer Service Design

Enter the **Status**. Values inclue:
Approved, Rejected, Deferred, In-Progress

Enter the **Owner** of the requirement. This should be the functional owner who is the primary driver for the requirement (may be a team or a person)

Enter **Notes**, as necessary.

Enter Product Requirements
(Product Requirements worksheet)

These are created in Analyze stage. Enter the product requirements on the Product Requirements worksheet. Complete the following steps for each product requirement:

Project Name - should match High-Level Requirements Tab

Project Stage - see above

Requirement ID - should map to High Level Requirement ID as noted above.

Enter a **Business Topic** using the project's standard. Refer to the TOC worksheet to find the Business Topic that is appropriate for each **Requirement ID**. Copy the Business Topic from the TOC worksheet to the Business Topic field on the High-level Requirements and the Product Requirements worksheets. For example:

Requirement ID	Business Topic
1	Application Functionality
2	Customer Support
3	Usability

Continue numbering for other business topics (see TOC worksheet for details)

The project can modify the types of Requirement IDs that can be entered and the Business Topics that these requirements are mapped to by updating the TOC worksheet. To update the TOC worksheet, click on the TOC Worksheet hyperlink.

Enter a **Requirement Name**.

Enter a **Short Description** of the requirement.

Last modified by: User

Enter a **Requirement Type**. These values align to the ITDM Workstream for which the requirement is pertinent. Values include: — Go to Requirement Type

Application - Requirements pertinent to the Core Application, as well as any associated "RICEFW" components (Reports, Interfaces, Conversions, Extensions, Forms, Workflow)

Technical Architecture - Requirements for the technical infrastructure, environments, etc

Training & Performance Support - Requirements for initial training, as well as ongoing job aids and reference materials

Service Introduction - Requirements around introducing the new product or service to support, as well as impacts to the support team or environment

Deployment - Requirements around how and when the system will be deployed

Enter **Requirement Sub-Type**. These values help to reflect what the requirement pertains to in terms of overall project delivery. Values include: — Go to Requirement Sub-Type

Quality, Interface/Data, Security & Control, Content, Development Environment, Execution Environment, Operations Environment

Enter the requirement **Priority**. This can be L, M, H, or C (Low, Medium, High, or Critical) Definitions are as follows: — Go to Priority

Critical (C) - Can not live without

High (H) - Requirement is of high importance, but alternatives can be evaluated to meet the need

Medium (M) - Important – not critical but strongly desired by stakeholders

Low (L) - Optional – nice to have

Enter The **Release Number** that will include this product requirement. — Go to Release Number

Ensure that the RTM is put under version control so that older versions of requirements can be retrieved. Also, make updates as appropriate to Requirement Name, Short Description, and Long Description columns.

Enter a **Long Description** of the requirement — Go to Long Description

Enter a **Requirement Source (if applicable)** — Go to Requirements Source

ex - enter "SOW" for a requirement that came from the Statement of Work

enter "JAD Session - 11/20/2005" for a requirement that resulted from a specific "Joint Application Development" session

Enter the **Business/ Process** Area to which the requirements belong to, such as Billing or Customer Service Design — Go to Business/ Process Area

Enter the **Status**. Status values include: — Go to Status

Approved, Rejected, Deferred, In-Progress. Choose from the list.

Enter the **Owner** of the requirement. This should be the functional owner who is the primary driver for the requirement (may be a team or a person) — Go to Owner

Requirements Traceability Matrix

Track Requirements
(RTM - Lifecycle Tracking worksheet)

Enter **Notes**, as necessary.

The following fields on the RTM - Lifecycle Tracking worksheet have been pre-populated:
Project Name
Project Stage
Requirement ID
Short Description

To provide for requirements bi-traceability, the project may enter **multiple rows** for each.

To track requirements through the systems development lifecycle, complete the following information for each requirement:

Enter the **Release Number** that will include this requirement.

Ensure that the RTM is put under version control so that older versions of requirements can be retrieved. Also, make updates as appropriate to Requirement Name, Short Description, and Long Description columns.

Enter the requirement **Priority.** This can be L, M, H, or C (Low, Medium, High, or Critical) Definitions are as follows:
Critical (C) - Can not live without
High (H) - Requirement is of high importance, but alternatives can be evaluated to meet the need
Medium (M) - Important – not critical but strongly desired by stakeholders
Low (L) - Optional – nice to have

Enter the **High-level Requirement ID** to create traceability to high-level requirements.

For the **Analysis Stage**:

Enter the **Analysis Reference** to track the requirements through the analysis stage. List the names or the IDs that identify the analysis documents that resulted from the requirements.

Enter the **User Scenarios/Use Cases** to track requirements through the analysis stage. List the names or the IDs that identify the user scenario and/or use case documents that resulted from the requirements.

Enter the **Other Analysis Objects/Deliverables** to track requirements through the analysis stage. List the names or the IDs that identify these other analysis objects/deliverables that resulted from the requirements.

Last modified by: User

For the Design Stage:

Enter the **Design Reference** to track the requirement through the design stage. List the names or the IDs that identify the design documents that resulted from the requirements.

Go to Design Reference

Enter the **Design Objects/Deliverables** to track the requirement through the design stage. List the names or the IDs that identify the design objects/deliverables that resulted from the requirements.

Go to Design Objects/Deliverables

For the Build Stage:

Enter the **Code Module Reference** to track the requirement through the build stage. List the names or the IDs that identify the code modules that resulted from the requirements.

Go to Code Module Reference

Enter the **Interface Reference** to track the requirement through the build stage. List the names or the IDs that identify the interfaces that resulted from the requirements.

Go to Interface Reference

For the Test Stage:

Enter the **Test Script Reference** to track the requirement through the test stage. List the names or the IDs that identify the test scripts that resulted from the requirements.

Go to Test Script Reference

Enter the **Test Condition Reference** to track the requirement through the test stage. List the names or the IDs that identify the test conditions that resulted from the requirements.

Go to Test Condition Reference

Record Updates to Requirements
(High-level Requirements and Product Requirements worksheet)

As referenced in the project's CM Plan or Project Plan, controlling changes to requirements is a large part of the ensuring the requirement's integrity. To track changes to the project's requirements, enter the Change Request ID of the change request that has been approved to modify the requirement.

Go to Change Request ID (High-level Requirements)

Ensure that the RTM is put under version control so that older versions of requirements can be retrieved. Also, make updates as appropriate to Requirement Name, Short Description, and Long Description columns.

Go to Change Request ID (Product Requirements)

Requirements Definitions and Categories

All requirements, including the high-level requirements created in the Plan stage and more detailed product and product component requirements created in Application, Technical Architecture, Training and Performance Support, Service Introduction, and Deploy workstreams, need to be collected, documented, verified, analyzed, prioritized, validated and accepted by the stakeholders, baselined, and put under appropriate levels of configuration management. The types of requirements are shown in **Figure 1** below:

Project Stage

CMMI Term

Plan

High-level Requirements

Customer Requirements

Analyze

Application

Technical

Training and Performance Support

Support

Deployment

Product Requirements

Functional

Quality

Content

Interface/Data

Security and Control

Development Environment

Execution Environment

Operations Environment
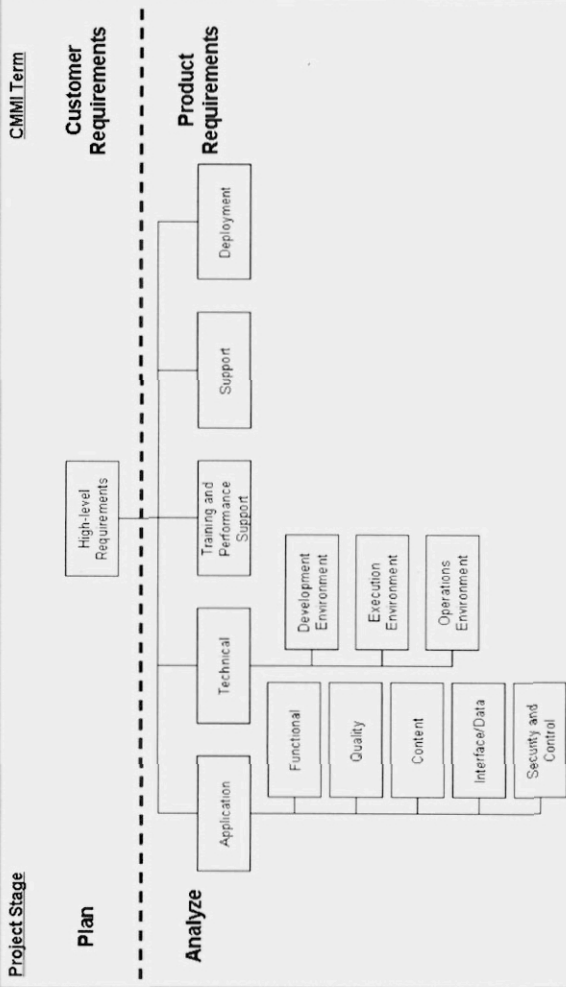
Figure 1 Types of Requirements

!!! Delete all these boxed instructions in the final version of your RTM !!!

High-level Requirements

Project Name:

Project Stage: <Enter the project stage>

High-level Requirement ID	Business Topic <Refer to the TOC Worksheet>	High-level Requirement Name	Short Description	Priority (L,M,H)	Release Number	Long Description	Requirement Source	Business/ Process Area	Status	Owner	Change Request ID	Notes
<Insert Requirement ID>	<Insert Business Topic>											
<Insert Requirement ID>	<Insert Business Topic>											
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High-level Requirements

| Project Name: | |
| Project Stage: | <Enter the project stage> |

High-level Requirement ID	Business Topic <Refer to the TOC Worksheet>	High-level Requirement Name	Short Description	Priority (L,M,H)	Release Number	Long Description	Requirement Source	Business/ Process Area	Status	Owner	Change Request ID	Notes
<Insert Requirement ID>	<Insert Business Topic>											
<Insert Requirement ID>	<Insert Business Topic>											
<Insert Requirement ID>	<Insert Business Topic>											
<Insert Requirement ID>	<Insert Business Topic>											

Requirements Traceability Matrix

Product Requirements

Project Name:
Project Stage:

Requirement ID	Business Topic <Refer to the TOC Worksheet>	Requirement Name	Short Description	Requirement Type	Requirement Sub Type	Customer QC Req Type

Requirements Traceability Matrix

Priority (1-Low 2-Medium 3-High 4-Critical)	Release Number	Long Description	Requirement Source	Business/ Process Area	Status	Owner	Change Request ID	Notes

Requirements Traceability Matrix

Project Stage: 0

Product Requirements					Analysis Stage		
Requirement ID	Short Description	Release Number	Priority (H, M, L)	High-level Requirement ID or SOW Reference	Analysis Reference	User Scenarios/ Use Cases	Other Analysis Objects/ Deliverables
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Last modified by: User

Requirements Traceability Matrix

Design Stage		Build Stage			Test Stage	
Design Reference	Design Objects/ Deliverables	Code Module Reference	Interface Reference		Test Script Reference	Test Condition Reference

Path	Requirement Type	Name	Description	Reviewed	Priority	Author
	#REF!	#REF!	#REF!	Reviewed	#REF!	#REF!
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How to Use the TOC Worksheet

The TOC Worksheet lists all Business Topics and their corresponding Requirement IDs. For example, all Requirement IDs that begin with 1 will correspond to the Application Functionality business topic. Further, a requirement with an ID of 1.4.7 will correspond to the Application Functionality business topic as well. Both the Requirement Begins With and the Business Topic columns can be modified to reflect the project's standards.

For example, if the project agrees to have requirements that begin as R1, R2, R3, etc., then modify the values in the Requirement Begins With column to include these values. Type the new requirement number on the same row as the business topic to which it corresponds.

To modify the Business Topic that is associated with a corresponding Requirement Begins With column, type the new topic in the Business Topic column. Type the topic on the same row as the requirement to which it corresponds.

Requirement Begins With	Business Topic
1	Application Functionality
2	Customer Support
3	Usability
4	Page Layout and Configuration
5	Content Management and Production
6	System Administration
7	Technical Architecture Security
8	Technical Architecture Standards
9	Interface Requirements
10	<Insert Other Requirement Topic #1>
11	<Insert Other Requirement Topic #2>
12	<Insert Other Requirement Topic #3>
13	<Insert Other Requirement Topic #4>
14	<Insert Other Requirement Topic #5>
15	<Insert Other Requirement Topic #6>
16	<Insert Other Requirement Topic #7>
17	<Insert Other Requirement Topic #8>
18	<Insert Other Requirement Topic #9>
19	<Insert Other Requirement Topic #10>
20	<Insert Other Requirement Topic #11>
21	<Insert Other Requirement Topic #12>
22	<Insert Other Requirement Topic #13>
23	<Insert Other Requirement Topic #14>
24	<Insert Other Requirement Topic #15>
25	<Insert Other Requirement Topic #16>
26	<Insert Other Requirement Topic #17>

Requirements Traceability Matrix

Revision History

Date	Version	Description	Author

Use Case ID	Use Case Name	Reviewed By Project Team	Review Date	Review Attendees	Comments
Unique Identifier	Provide hyperlink to use case	Yes/No		List of business / IT project team members who attended the use cases review session	

Use Case ID	Unique identifier for the use case.
Name	The name of the action, task, or event in which the use case is representing.
Description	Brief description (1-3 sentences) of the use case.
Actor	Who is the main actor that this use case represents?
Precondition	What preconditions must be met before this use case can start?
Trigger	What event triggers the use case?
Special Requirements	Requirements that are needed for the completion of the use case that are not explicitly covered by the flow of events.
Post Condition	Condition(s) that will be set after the use case completes.
Basic Flow	When everything is perfect.
Exception Flow	When there is an error/exception.
Alternate Flow	Is there an alternate way for the user to complete this action?

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Non-Functional Requirements Checklist

The purpose of this checklist is to serve as a thought generator around the types of items that should be considered when identifying and documenting non-functional requirements. The list can serve as a reference during the requirements gathering process. This list is not all inclusive.

Solution Architects are available to assist projects in working through the non-functional requirements.

☑	Category	Items to Consider
☐	Auditability	Functions that need to be tracked and analyzed retroactively
		Need to audit/track additional financial and/or other functional activities to maintain operational integrity?
		What information needs to be tracked? How will it be tracked?
		Data audits: Is there a need to track the value before and after changes? Is there a need for a timestamp for the changes?
		Retention period for audit trails/logs
		Archiving/restoration strategy for audit trails/logs
☐	Availability *The time when the application must be available for use.* *Required system availability is used in determining when maintenance may be performed.*	Desired 'up time' during which the system and data are available for use
		Degree to which a system or component is operational and accessible when required for use
		Does the application/database or process feed critical processes, databases, or applications that must be active due to regulatory or revenue impacts?
		What tier does the system need to conform to? • Input from the Business Continuity Plan (BCP) should be considered • Do the availability-related requirements support the BCP?
		What downtime is required to service the system (health, maintenance, deployments)?
		Time zone(s), hours of operations, user locations, SLAs

☐	Backup and Recovery *The process of copying and archiving information so that it may be used to restore the original data after an event that causes loss.* *Applicable to data, database data, files, reports, source code, configuration files, etc.*	Frequency of performing backups of the information Number of backups to maintain Where backup copies of the system and data held within it will be stored. Typical business scenarios requiring recovery of solution to a previous state. For example: • Undo a periodic data upload • Undo integration that is incomplete or contains bad data • Resynchronize data integrations with recovery Requirements on the time to recover data or configuration to restore the solution to a previous state. Discuss plans to have a Continuity of Operations Plan (COOP) and procedures for the system
☐	Business Continuity Plan	Is a Business Continuity Plan required? Does an existing Business Continuity Plan require updates?
☐	Data Conversion and/or Migration *Process of moving data from one environment or system to another, including possible changes to align with data definition and structure in the destination.*	Does data need to be migrated to another system? How will the data be migrated from the source to target environment? Documentation, logs, etc. needed to validate the data was migrated successfully Checks to be done or put in place to verify that the application is accessing the new information target and not the old Storage capacity (current and growth) needed for migration or conversion of the data Security changes needed to support access to the migration or conversion data How much of the existing data should be migrated? All? • Identify data elements to be migrated and disposition of non-migrated data elements Data retention requirements for any data not being migrated Disposition plan for data not migrated

| ☐ | Data Retention & Archival

The length of time that various data will be retained in the system. | How long the data should be retained

Legal, regulatory and other policies that govern length of time data should be retained

Are the data/documents covered by Duke Retention Rule?
• Consult Records & Information Management Compliance group

What data elements need to be retained - all or a subset?

Level of detail (summary or detailed)

Contractual or licensing considerations with creating archival of data

Upstream / downstream systems / business processes impacted by archive

Would retention requirements for other business processes prevent archival of data?

Consider future archival requirements during current project to ensure all future archival and retention needs can be met

Develop a strategy for future archival and purge

What should be purged vs what should be archived

How will archived data be accessed? i.e. ad hoc query access, through the application, another tool, etc.

Requirements to use the application to access the retained and archived data

Can the data be extracted from the active data source and put in a data warehouse or other data format and still meet requirements?

Read/write access to archived data, or read access only?

Is there a need for the ability to restore production system and/or recreate transactions?

Identify schedule for routine purging of data from the system |

		How long will operational data be stored in the transactional database? Are there any archival requirements? How will non-production data be sourced? If the system produces files (logs, errors, etc.) what is their lifecycle and maintenance plan?
☐	Disaster Recovery / Recoverability *The ability to restore function and data in the event of a disaster, either natural or man-made. Ensures that if any kind of system failure occurs, regardless of the reason, the system will operate with minimal interruption.*	Is a Disaster Recovery Plan required? Does an existing Disaster Recovery Plan require updates? Requirements on time the system takes to recover from a disaster or system failure Consider Recovery Point Objective identified in hours or days by the Business Interfacing applications and data integrations to be recovered or resynchronized, or other impacts
☐	Error & Exception Processing	How will the system report errors? Which exceptions are anticipated and should be considered for design? Define conditions that will cause an error/warning to a user. Which systems/processing exceptions should trigger notification of errors? Are there any specific requirements for storing of error files or log files? Will they be used for trending or reporting on another system/server? How will error conditions be logged? System monitoring tools, help desk procedures, business process to handle exceptions and errors, etc.
☐	Flexibility	Will system features specified in requirements change over time? Types of things needed to be more flexible in system

		Configurability - defines ways that users can customize the system to allow for flexibility. With flexibility comes complexity. This complexity must be adequately documented to reduce support costs and development ramp up time.
☐	Hardware/Software Environment	Devices to be used (laptop, desktop, etc.) Special considerations for challenging lighting environments, temperature variation, other environmental factors Platforms? Portability - the ability to use the same software in different environments/different platforms. Ex. The software must run on any Windows XP or higher operating system.
☐	Information Integration	Does information need to be validated against other internal or external information sources? Does information come from other definitive sources (systems of record)? Does information collected need to flow to other information targets such as other applications or business processes? Does information transferred to or from the system need receipt and acceptance verification?
☐	Licensing *The contract between the vendor and Duke, establishing Duke's right to use the software.*	Any impact to user licenses caused by change in user base Changes in infrastructure processing needs Available licenses for all software needed to implement the application including application software and middleware Larger capacity server required? May have impact to available software licenses Types of licenses needed such as enterprise software, hosting software, infrastructure, monitoring agents licenses, individually purchased licenses (shrink wrap software), etc.

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☐	Monitoring	What critical events of the business process should be monitored?
	Process for observing, detecting abnormalities, and recording the system's operations in a controlled manner.	How does the system need to be monitored systematically?
		Are there alerts/notifications that need to be generated if certain thresholds are reached? (For example: concurrent users, number of messages in a queue, queue activity, stopped services, etc.)
		Are there specific instrumentation requirements needed for the servers?
		Are there interfaces that are passing data between systems that needs to be monitored?
		Sample components to monitor: Application, System, Database, Queue
		Specific monitoring tools to be used?
☐	Mobility	How will users access the system from their mobile device (Application or URL)?
		Form of mobile device envisioned: rugged laptop, tablet, mobile phone, other.
		Access to the solution in a connected (logged onto the Duke network) vs. disconnected (not logged onto the Duke network) state? Both? • Need to cache application data for use when disconnected or intermittently connected to network?
		Need for remotely located workers? • Will mobile capability need to be available outside and exposed to weather?
		Mobile capability to collect or display data • Identification of (internal or external) data sources • Information timelines for remote worker – wireless real time connection, information downloaded while connected to network, etc. • Synchronization of data collection with centralized data repository • Need to take electronic readings
		Is information on mobile device company sensitive or proprietary

		requiring data encryption? Need to simplify application displays for use on mobile devices? Mobile GPS / GIS needs? • Need for GPS capabilities / location? • Need to display geospatial information? • Is external mobile access needed? • Is there a need for Airwatch integration?
☐	Network Communications	Will application run on its own subnet, or sequestered from other mainstream network traffic? Issues regarding network redundancy External connectivity requirements Are users geographically dispersed, with varying levels of connectivity? Any requirements for non-standard/unconventional network connectivity?

☐	Performance
	
	*The amount of work accomplished by the **system**. Can be related to time, throughput, capacity, concurrency, etc.*
		Time – how quickly the system will complete actions.
		• Response times
		  o Time to complete specific processes based on business requirements, speed of operation
		  o Ex. Application loading, screen open and refresh times
		• Processing times
		  o Functions, calculations, imports/exports
		• Query and Reporting times
		  o Initial loads and subsequent loads
		
		Throughput - ability of system to execute a given number of business or solution-related processes within a given unit of time.
		• How many transactions per hour/day does the system need to handle?
		
		Utilization / Capacity - the expected volume that the system must handle.
		• Transactional volume
		• Static volume
		  o Number of business system users by type
		  o Number of different user locations

		o Number of customers, etc. • Storm volume • Current volume vs. Projected growth • Maximum acceptable loading thresholds • Utilization thresholds when supporting the workload Concurrency - the simultaneous usage of the system. • How many users will the system need to handle? • Concurrent users vs active users? • What is the total number of concurrent sessions that can be opened by a single user? Storage –how much data does the system need to store? Are there any bandwidth/networking requirements? What Service Level Agreements (SLAs) does the system need to adhere to? • Login time? • Specific business transaction times? • Specific transaction throughput? • Loading and utilization thresholds? • Batch processing targets?
☐	Redundancy and Failover	Criticality of the component or solution – is it mission critical? Which components need to continue operation in cases of hardware/software failure to support business functions? If one server goes down, how many backup servers do you have? Acceptable period of downtime that system/component can experience while failing over? Is there some loss of functionality acceptable in a failed over environment? Is some degradation of quality attributes acceptable in a failed over environment? What degradation would be acceptable?

☐	Reliability *Deals with the continuous availability of the product to users and the ability for the system to perform as required over time. States what availability is necessary and desirable.*	Consider: • Complete or partial loss of the ability to perform a mission-critical function • Loss or corruption of data • Loss of user productivity Time between failures – what is the acceptable threshold for down time? Time to recover – if broken, how much time is available to get the system back up again (partial vs full)? Example: Application will be available to users 98% of normal working hours.
☐	Reporting	New reports and / or changes to existing reports needed? Custom vs standard (delivered) reports. Is there a need for ad hoc reporting? If canned reports are delivered with a purchased product, are there requirements outside of those reports? Will report(s) need to be executed automatically by the solution, or will end users run them on demand? Control/verification reports between interfaces? Regulatory reports required? Understand how each report will be used. How do the reports fit into the business process? Who are the end users? Do changes in the current business process require any report changes? Understand each and every element in the report. • Report criteria, filters and sort options defined • Confirm all required data exists in the operational or reporting data base. • Are new data elements needed for the report?

		Does the designed report deliver what was wanted? Is data movement required as a result of reporting?
☐	Scalability *Defines how easily can the system support increased number of users/volume (i.e. such as in a merger).*	Growth expectations for number of users, concurrent users Growth expectations for platform and storage requirements How does the system need to scale to handle growth? How much data should the database be able to handle in terms of volume, load, and growth? Are there requirements on disk capacity?
☐	Security *Defines the required level of access, protection and controls in a system.*	Changes of ranking of the application resulting from this project? Any regulatory requirements or impact to data covered by regulatory requirement (SOX, HIPAA, NERC CIP, etc.)? Connection to another internal system or application? Are there any network segmentation or firewall changes needed for the system? Authentication • Should a specific kind of authentication be used? • Is there a need for cross-domain authentication? • Are there any active directory requirements? • Will the system need to provide single-sign-on (SSO)? • Access needed by external customers or third-party business partners? Authorization • What kind of authorization should be used? • Are different levels of access needed (ex. Role Based Security)? • What are the levels of access needed for each type of user? • Is increased access or changed access to some type of protected information needed (SSN, personal employee data, etc.) External Access / Interfaces • Is there a need for external facing or external interfacing?

		- Will project provide any protected or sensitive data to external customers or third party business partners? - Connection needed to external vendor or partner's network or system? - Does external vendor or partner's network/system need access to Duke resources? Controls - Preventative measures to defend against hacking threat? - Does the system need to provide TLS? - What is the total amount of idle time before the user session is forced to terminate? Encryption and Protection - Will any sensitive data be stored or used in a transaction? - Any need for protection of sensitive data as it is viewed/used in a system? - Will encryption be used by the system? If so, what kind?
☐	Service Introduction *i.e. Production Support*	Who will support the system after go-live? When/who will assist users with system questions & concerns? Example: The help desk will support the application from 8:00 am to 5:00 pm weekdays, excluding Duke holidays
☐	Software Dependencies *Other software products required to be installed for the application to function.*	Are any other software products required to be installed for the solution to function? Software is Duke approved and/or licensed product? Requirements for distribution/ installation of the solution? Requirement for solution to work on multiple platforms, or capable to migrate from one platform to another
☐	Standards & Compliance *Ensuring that the system complies with relevant laws and regulations.*	Identify existing corporate security, architectural and branding policies / standards. Any legal or regulatory body that mandates specific functionality to be included in application? Is this a SOX application? Is this a NERCCIP application?

		Will this application be monitored for NERC? Is there a need for interface controls for auditing purposes? Exemptions or exceptions to standards required?
☐	System Maintenance	When will regular system maintenance be performed? How much time will be needed to perform maintenance? How will system maintenance be communicated to users?
☐	Usability *How "easy-to-use" the finished product will be.*	Interaction (e.g. screen navigation), display (e.g. screen layout), affective (e.g. aesthetic) as well as measurable requirements for user performance or productivity (e.g., two minutes to complete a transaction). Describe the data fields (i.e. read only or editable; auto-populated or user defined; options or required, etc.) How easy is it for users to learn the system? How easy is it for users to memorize steps? Training time for normal user and power user Measureable task times for typical tasks Conform to common usability standards Examples include but are not limited to requirements for adjustable-height workstations, color and duration of error messages, physical placement of critical indicators or buttons, shortcuts, language support, and use of auditory signals.

Requirements Peer Review Checklist

This checklist is intended to validate that the requirements are consistent, organized logically, and are clear to any reader. It will be used by Business Analysts during peer reviews as a method for gathering feedback on requirements. Refer to "Guidelines for Good Requirements" in the Developing Requirements Guideline.

Note: Requirements should be peer reviewed and any changes incorporated into them before they are reviewed and approved by the business.

#	Review Question	Yes/No, Comments, or N/A
Organization and Structure		
1	Has the most current PL101 template been used and all sections completed? If the PL101 was not used, were all of the required aspects covered?	
2	Are all functional requirements prioritized?	
3	Are all requirements assigned to a responsible party? (e.g. Duke IT, Vendor, etc.)	
4	Are all requirements uniquely numbered? (e.g., HLR0000-DLR0010)	
Entirety		
5	Are all requirements within the requested project scope? Can the requirements be traced back to the business case (as appropriate)?	
6	Have all non-functional requirements been defined?	
7	Have requirements for all interfaces been defined (as appropriate)?	
8	Are use cases complete, including alternative flows?	
9	Do the business process flows make sense? Does every decision point show yes and no paths?	
10	Are all of the acronyms and terms mentioned throughout the requirements documents defined in the project's glossary?	
Clarity		
11	Are all functional requirements verifiable and testable?	
12	Are all requirements written with a consistent and appropriate level of detail?	
13	Are there any duplicate requirements?	
14	Are there any requirements that conflict with each other?	
15	Does each requirement have only one interpretation? *Look for vague verbs: handled, rejected, processed, skipped, eliminated, etc.*	

16	Are the requirements focused on the what, rather than the how? *Look for implied or stated design or implementation solutions.*	
17	Do any requirements contain vague terms? *Look for: some, sometimes, occasionally, often, usually, ordinarily, most, mostly, however, or, etc.*	
18	Do any requirements contain incomplete lists? *Look for: etc., so forth, so on, such as.*	
19	Do any requirements contain ambiguous pronouns? *Example: The I/O module communicates with the data validation module and its control flag is set. Whose control flag?*	
20	Is the terminology consistent with the users' or customers' terminology?	
Non-functional Requirements		
21	For assistance with non-functional requirements refer to the <u>Non-functional Requirements Checklist</u>.	

DUKE ENERGY.

\<Project Name\>

1   CHANGE DESCRIPTION

Clearly identify the change in language to existing Requirement(s) or New Requirement(s) being introduced.

2   CHANGE IMPACT

Requirements Change Planning Worksheet

Instructions:

1. In collaboration with Functional/Technical SMEs, Technical Lead and Project Manager, perform analysis to determine the impact to each area
2. Submit to Project Manager, review, and modify as needed

ID	Area of Potential Impact	Impacted (Y/N)	Hours Estimate	Resources Required	Brief Description of Action Needed
1	Business/IT Process Flows				
2	Use Cases-Scenarios				
3	Functional Designs				
4	Technical Designs				
5	Code Modules				
6	Test Case Preparation				
7	Test Cases Execution				
8	Deployment				
9	Service Introduction				
10	Training/Organizational Change				
			0		

DUKE ENERGY CORPORATION
DUKE ENERGY OHIO, INC.
SUMMARY OF MANAGEMENT POLICIES, PRACTICES AND ORGANIZATION
HUMAN RESOURCE DEPARTMENT
SFR Reference: Chapter II(B)(9)(h)(i, ii, iii, iv, v)

I.   Policy and Goal Setting

The Chief Human Resources Officer (CHRO), has overall responsibility for Human Resources with input from the HR leadership team. The Human Resources Department assists the Company in achieving its business goals by planning for and facilitating the acquisition, development and maintenance of an efficient and productive workforce.

The CHRO, with input from the HR leadership team, participates in strategic planning discussions with corporate senior management. As a result of these meetings, the HR leadership team develops goals and objectives for Human Resources in support of the overall business plans of the Corporation and individual business units. The goals are developed in partnership with and reviewed with Company officers to ensure alignment with Corporate goals. At the next level, departmental and individual goals are evaluated and reviewed annually as a part of the performance management process, which is used to determine annual salary adjustments.

Human Resources also supports the corporate goals and objectives by developing and administering appropriate Human Resources policies, as described in the Our Company/Policies section of the Employee Portal. The Labor Relations/Employee Relations division is the custodian of HR Policies for the Company. HR Policies communicate the performance and behavior expectations of Duke Energy employees, and the consequences for policy violations. HR Program documents explain what each program offers and how to start using the program. Employees must read each HR Policy and Program to determine whether it applies to them and what it requires. The applicability to unionized and non-unionized employees of each HR Policy and Program is stated in each document. For unionized employees, where a conflict exists, the terms of the applicable CBA, related agreement, or binding past practice shall control.

II.   Strategic Planning & Long Range Planning

The Human Resources Department is involved in three phases of planning support: strategic, operational and budgeting:

        •   The HR business plan is developed by the CHRO and the HR leadership team. The HR business plan is developed to support the Corporate and

1

Business Unit plans. Functional leaders within HR are responsible for developing long and short range plans that support and facilitate the overall corporate objectives. Daily operational decisions on functional matters are routinely made by functional leaders. Goals and objectives which affect corporate policy or multiple departments are reviewed and discussed with the CHRO, with input from senior corporate management as needed.

- The HR leadership team and their direct reports develop internal operational plans and goals that support and enable the HR business plan.
- Programs which support the HR business plan and departmental plans and goals are translated into resource requirements during the budgeting process conducted annually during the fall.

The CHRO attends the CEO's staff meetings and is a member of the SMC. HR leadership team members likewise participate in business unit, departmental and division staff meetings to communicate Human Resource employees' progress toward company and department goals and objectives.

III. Organizational Structure

The CHRO reports to the Chairman, President and CEO. The CHRO's organization encompasses several functional divisions, each led by a member of the HR - leadership team, which include the following departments:

- Talent Management
- Labor Relations/Employee Relations
- Total Rewards
- HR Operations
- HR Business Partners; and
- HR Program Integration

See Exhibit HR-1.

IV. Responsibilities

The overall goal of Human Resources is to assist the Company in achieving its business goals by planning for and facilitating the acquisition, development and maintenance of an efficient and productive workforce, under conditions which foster positive employer-employee and union relations and which conform to the legal requirements imposed by local, state, and federal governments and regulatory bodies, as further described below:

A. **Talent Management: led by the VP, Talent Management**. The primary goals of the Talent Management Division are to:

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- Align talent strategies with Company business strategies
- Anticipate workforce needs and deliver high quality talent
- Assist in transforming the Company to a high performing culture
- Accelerate employee development and knowledge sharing
- Grow high performing leaders and critical skills; and
- Build a pipeline of Ready Now leaders

The Talent Management Division is further organized in the following departments:

- ***Executive and Leader Effectiveness*** - responsible for preparing senior leaders for the challenges of today while building bench strength for the future. This includes developing competency models and measurements for same, managing leadership and high potential development, and overall talent and organizational consulting
- ***Employee Engagement & Enablement*** – responsible for Transforming our company to a high performing culture through the use of employee engagement surveys, engagement analytics, ownership and management of the end to end Performance Management Process and enhancing the overall employee experience
- ***Learning and Employee Development*** – responsible for providing learning solutions that are just in time, just enough and just what the business and employees need.
- ***Talent Acquisition*** - responsible for staffing/recruiting, , internal moves, executive recruiting and sourcing, selection and pre-employment administration, and strategic sourcing. This group also manages the Talent Acquisition systems and tools.
- ***Diversity and Inclusion*** – responsible for managing Employee Resource Groups (ERGs), engaging millennials, and diversity & inclusion consulting at all levels of the Company.

B. Labor Relations/Employee Relations: led by the VP, ER and Labor Relations:

- ***Labor Relations*** - Supports union and labor management, collective bargaining, policy, strategy, and issue resolution. The Labor Relations group establishes the long-term labor strategy for segments of the US-based organization with employees represented by labor unions, ensures effective relations with union leadership, negotiates contracts, ensures accurate administration of labor contracts, and compliance with all applicable laws. The Labor Relations department works closely and collaboratively with business units and corporate function leaders to:

  - Provide input on the consistent administration of labor agreements, provide guidance on labor matters, identify business initiatives or opportunities which may require bargaining with the Unions, and any labor relations training needs;

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       o   Identify policy or labor contract issues that impede management effectiveness.

- ***Employee Relations*** - The Employee Relations function supports employee management, policy, strategy, and issue resolution. This department's function is to develop and deploy common workplace practices, to create consistency and clarity of expectations and accountability, to simplify processes and reduce bureaucracy, to develop appropriate policies resulting from workforce strategy initiatives (e.g. virtual work environment), and to create a safe, positive work environment at Duke Energy.

  Another responsibility of Employee Relations is to develop a comprehensive HR risk management approach to include effective integration and analysis of exit interviews, open-door and recourse data, and ensure a systematic approach to enterprise-wide compliance with internal policy/procedure and employment regulation:

  - o Manages the centralized process for employee investigations
  - o Implements HR risk management program to identify, assess, monitor and mitigate risks associated with employment law compliance, internal controls and managerial effectiveness
  - o Performs risk assessments, reviews results, and monitors compliance initiatives and activities
  - o Ensures stakeholders are effectively aware and trained on HR related external laws and internal policies
  - o Promotes and enforces an effective program consistently through appropriate incentives and appropriate disciplinary measures for failing to take reasonable steps to prevent or detect non-compliant or high risk practices
  - o Responds timely and sufficiently to information requests from the CHRO, Chief Ethics and Compliance Officer, and other stakeholders
  - o Establishes and implements effective risk management systems including listening posts (employee surveys, exit interviews, etc.) and HR data analysis to proactively identify, assess and mitigate risks associated with managerial effectiveness.

C. **Total Rewards:**

Led by the VP, Total Rewards & HR Operations, the Total Rewards group is responsible for:

- ***Compensation,*** which provides the following processes and services:
  - o Design Retention Plans
  - o Design Broad-Based Incentive Programs

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- o Job Pricing / Benchmarking of Jobs
- o Consult with HRBPs on Compensation Issues / Proposed Changes
- o Harmonize Compensation (merger integrations)
- o Manage Incentive Payouts
- o Manage Annual Merit Program

- **_Executive Compensation_**, which provides the following process and services:
  - o Manage Stock Plans (Ownership, Vesting's & Grants) with Fidelity
  - o Manage Auditors & Partner With Legal on Proxy Tables
  - o Manage ESP & DSP Annual Elections, Contributions & Distributions
  - o Implement Equity Projects (i.e., Merger Integration)
  - o Manage Implementation of Ad Hoc Projects (YBR Updates, Mergers)
  - o Consultation to HRBPs (job pricing, retention analysis, separations)
  - o Recommend/Design LTI/STI Plans
  - o Conduct Ad Hoc Analysis re: Designs & Projections
  - o Support HRBPs & Partner with Legal, Accounting & Payroll on EC Matters
  - o Support MARDs activities & Rate Cases
  - o Prepare/Review Board & Comp. Committee Materials
  - o Respond to Leader/Retiree Questions & Resolve Issues
  - o Manage STI Setup & Payout for ELT
  - o Provide Survey Data Support
  - o Conduct Educational Webcasts
  - o Manage Portal Content on Executive Center
  - o Administer Insurance Policies, Premiums & Claims
  - o Process Payments (Financial Planning, Separation Agreements, etc.)

- **_Health and Welfare,_** which provides the following process and services:
  - o Health Mgmt. Strategy, Plan Design & Stakeholder Approval
  - o Requests for Proposals (RFPs) & Vendor Management
  - o Pricing/Budgeting of Plans
  - o Consultation with HRBPs and HR Services
  - o Industry Trends & Benchmarking
  - o Measurement & Analysis of Plan Performance & Engagement
  - o Research & Guidance to HR Services & myHR Teams
  - o Vendor Summit
  - o MARDS Support
  - o Compliance Activities (SPDs, SBCs & SARs, HIPPA, COBRA, etc.)
  - o Project Implementation (e.g., YBR Upgrades)
  - o Wellness Incentive Program Implementation/Admin.
  - o Change Requests
  - o Handle Escalations

- **_Retirement,_** which provides the following process and services:
  - Manage Pension Plans
  - Engage employees in retirement planning discussions (roadshows, etc.)
  - Pension Plan Design
  - 401(k) Plan Design
  - Manage Vendor Relationship (Fidelity)
  - Plan transitions (to Cash Balance)
  - Maintain Legacy Plans
  - Develop capabilities/tools for participant Financial Wellness
  - Analyzing Cost Efficiency of Plans
  - Escalations/Investigations for Legacy Plans
  - Presentations to Labor Relations
  - Compliance / Regulatory Testing

D. HR Operations, led by the VP, Total Rewards & HR Operations, is responsible for:

- **_Vendor Management_**
  The role of vendor management is to manage vendor relationships and third party contract negotiations to ensure compliance with service level metrics and adherence to contractual requirements. They serve as the single point of contact for HR vendor issue resolution, and ensure HR administrative service providers deliver services according to the Statement of Work and Service Level Agreement for benefits process administration.
- Manage supplier relationships and ensure consistent governance practices are communicated and followed
- Oversee development of supplier sourcing plans to ensure alignment with HR business requirements; provide guidance and offer alternatives and suggestions
- Coordinate development of RFPs to suppliers and facilitate the review/selection process
- Facilitate the contract negotiation process; ensure comprehensive Service Level Agreements (SLAs) and Performance Guarantees (PGs) are documented and agreed upon
- Review and facilitate approval process for supplier statements of work (SOWs)
- Ensure suppliers' compliance with contract terms, SOWs, and SLAs/PGs; maintain supplier scorecard and report results
- Facilitate resolution of supplier issues; escalation point when resolution efforts are stalled
- Facilitate supplier transitions
- Coordinate annual planning session with suppliers to ensure alignment with business needs

Aon Hewitt, a global leader in human capital consulting and outsourcing solutions, currently provides Human Resources Outsourcing to Duke Energy.. Aon Hewitt provides back-office human resources administration and related information technology systems. The main services that Aon Hewitt provides Duke Energy include:

- Benefits administration – Health and insurance benefits and defined retirement benefits
- Payroll and related tax administration
- Workforce administration
- Absence management administration
- Compensation administration
- Call center services
- Employee and Manager self-service applications
- Performance management and succession planning administration
- Staffing technology

The objective of the Aon Hewitt contract is to: 1) provide enhanced service to Duke Energy employees and retirees, and 2) provide a more efficient way to handle back-office human resources work based upon Duke Energy's Strategic HR vision.

- ***HR PMO***
  The program management office (PMO) is accountable for the successful execution and completion of HR systems projects that typically require budget (O&M and/or capital) and dedicated resources.
- Accountable for the successful execution and completion of HR systems projects that typically require budget (O & M and/or Capital) and dedicated resources
- Supporting and integrating project management processes across organizational boundaries
- Provide products, services and resources that either mitigate or directly address the root cause(s) of challenges facing a project by:
  - o Maintaining common project management methodology for all HR projects. Methodology addresses project work structures, organizational models (roles & responsibilities) and management tools and processes.
  - o Ensuring coordination, communications, cooperation and organizational integration throughout the project life cycle
  - o Monitoring, analyzing and reporting project performance (i.e., progress, costs, risks) from inception to completion
  - o Providing HR Resource Management for HR Operations & COEs
  - o Develops HR Project Managers

- o Leverages Change Management resources for projects to ensure successful customer "experience"
- Provide consultation and coordination for the execution of human resources related matters associated with mergers, acquisitions, reorganization and divestitures (MARDS)

- ***Business Management***

  The business management function prepares and monitors HR function and corporate benefits budget and forecasts. They oversee the timely and sufficient response to financial controls processes including external requests.
- Prepare and monitor HR function and corporate benefits budgets and forecasts
- Manage and account for day-to-day transfers to funding vehicles and payments for benefit plan costs, such as medical claims payments and savings plan contributions
- Prepare and file any government or compliance reporting for benefits plan reports, such as the 5500s, PBGC premium filing, and manage external audits of benefit plans
- Monitor the HR control environment to identify and understand risk exposures in HR function; provide assessment of non-compliant activities and address risk exposures
- Coordinate and oversee the timely and sufficient responses to financial controls process testing including audits, disclosures and other requests (i.e.: Sarbanes Oxley, external reporting, internal audits)
- Partner with Corporate Accounting and Finance on accounting, funding, and disclosure issues related to applicable plans or other finance related requests

- ***HR Data Utilization & Reporting***, which provided the following processes and services:
  - o Workforce Hub Functional Ownership
  - o Processes & Controls; Standards & Exceptions
  - o IT Integration / Workforce Hub Prioritization
  - o Data Security Governance & Admin
  - o Data Governance
  - o Audit & Investigations Support
  - o Data Analysis
  - o Handling Picasso Tickets
  - o Data Archiving
  - o Enterprise/SMC/ELT Scorecards
  - o Fast Facts
  - o 3 Year Business Plan
  - o HR Crisis Mgmt. / Governance
  - o HR Business Continuity Plans

- Disaster Recovery Plan
- HR Business Planning & Analytics
- Risk Assessment / Management
- Project Governance
- Project Management Office
- MARDS Support
- Roadmap Implementation
- PMCOE Integration & Compliance
- Standard & Operational Reporting
- Ad Hoc Reporting
- Reporting Tools
- Government Reporting

- ***HR Supplier Management Processes & Services***, which provided the following processes and services:
    - Manage Day-to-Day Details of myTime Project Initiatives
    - Manage Lifecycle of System Initiative Implementations
    - Develop Long-Term HRMS Strategy
    - Lead NERC/CIP Effort
    - Prepare Economic Analysis & Business Case for HR Systems Initiatives
    - Operational Oversight & Escalation for Talent Dev. & Comp. Systems
    - Develop & Execute Supplier Governance Model
    - Oversight/Direction for Supplier Sourcing Events
    - Project Mgmt. Support for non-PMO Process/System Improvements
    - Consult on Supplier Contract Negotiations
    - Provide System Admin. & Ops Support for Talent Manager
    - Configure HR Systems to Align with Process Requirements
    - Provide HR Systems Admin. & Ops. Support for my Training

- ***HR Services (Payroll/Time & WFA) Processes & Services***, which provided the following processes and services:
    - Oversight of Outsources Payroll Service
    - Definition of Internal Payroll Processes
    - System Administration Time Reporting System & Processes
    - Regulatory Audit Oversight
    - Payroll Transaction Processing & Analysis
    - Management of Payroll Overpayment/Repayment Process
    - Management of Year-end Closeout Activities
    - Manage Payroll System Changes Related to Corporate Initiatives
    - Leave Time Reporting Management
    - Integrate Functionality across HR Function
    - Provide Oversight to HR Portal & User Experience
    - Manage Workforce Admin. Toolset

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- o Management of Vendor Contractor Data
- o Manage Workforce Admin. Transactions
- o Problem Solving for Workforce Transactions
- o Data Troubleshooting & Cleanup
- o Regulatory Reporting Oversight
- o Wage Progression Program Administration for Craft Employees
- o Oversight of Employee Charitable Campaigns
- o FERC/NERC Requirements Support
- o Org. Chart Maintenance

- • ***HR Services/HR Service Center Processes & Services***, which provided the following processes and services:
  - o Manage Performance of Outsourced Service Centers
  - o Manage HR Escalated Issues process
  - o Monitor Service Center Activity for Continuous Improvement Opportunities
  - o Support Manager & Employee Inquiries
  - o Case Management for Manager/Employee Issues
  - o Administer Employee Service & Retirement Awards
  - o Administer Employee Discount & Tuition Reimbursement Programs
  - o Manage Employee Commuter Program

E. HR Business Partners, led by the VP, HR Business Partners:

The purpose of the HR business partner organization is to provide consultative services to executive and line management within the businesses. HR business partners serve as the primary contact of business leaders and conduit in verifying needs, securing the right resources/tools (per Centers of Expertise (COEs)), educating leaders on HR's services & value and executing priority organization-wide programs. HR business partners support front-line management serving as the "eyes and ears" in proactively addressing employee relations and engagement issues. The role of the HR business partner is to consult with line management on human capital performance that includes, but is not limited to, talent development, change management, organizational development, positive employee relations, diversity and inclusion, workforce planning, strategic problem resolution, business results and process improvements. The HR business partners ensure proposed HR programs are consistent with business objectives and serve as advocates for change.

HR Business Partners provide the following processes and services:
- • Discern Customer Issues, Workforce Strategies & Change Mgmt. Needs
- • Consult with LR on Matters Related to Collective Bargaining
- • Consult & Advice Mgmt. & Employees on HR Policies & Programs
- • Consult with Mgmt. on Risk Mitigation Plans to Address Employee Trends
- • Consult with Mgmt. on Employee Engagement & Dev. Approaches

- Consult with Business Leaders on Org. & Leadership Effectiveness
- Provide Consulting & Governance on Implementation of Workforce Plans
- Consult with Mgmt. & Employees Regarding Workplace Issues
- Leverage HR Service Delivery Model to Support/Resolve People Issues
- Provide Oversight & Direction on Workplace Investigations
- Facilitate Resolution of Conflict Between Employees
- Facilitate & Consult in Support of Effective Performance Mgmt.
- Facilitate Development Plans for Leaders
- Implement Critical Position Succession & Talent Development Planning

F. HR Program Integration, led by the Director, HR Program Integration:

The purpose of the HR Program Integration organization is work with HR senior leadership to define and integrate the strategic priorities for the function. In addition this function is responsible for developing the communications and change management strategy in alignment with the functional priorities, utilizing industry best practices and developing an integrated HR planning calendar.

HR Program Integration provides the following process and services:
- Develop & Manage Change Plans for Aligned COE
- Consult with HR Leadership On HR Program, Process & Systems Changes
- Support various COE processes and programs to include Stakeholder Analysis, Training, Communications
- Establish Processes for Developing and tracking HR goals and Initiatives in Alignment with Business Unit Strategy

V. Practices & Procedures

Day to day practices and procedures are outlined above in the "processes and services" listings for each HR department.

VI. Decision-Making and Control

The HR department has principal accountabilities to the CEO, Board of Directors, SMC and the Business Units. The applicable department leads within HR are accountable for managing, reviewing, monitoring, reporting and improving the strategies, programs, policies, procedures, practices and results of designated functions.

The CHRO provides oversight and governance to Human Resources, in conjunction with the HR leadership team. The CHRO attends the CEO's staff meetings (SMC meetings). Appropriate pending decisions regarding policies and programs on corporate matters are reviewed and discussed. Department and division staff

meetings are held after the SMC staff meeting to communicate corporate matters and decisions and to monitor the impact of decisions.

HR leadership members serve on several oversight councils sponsored among business units and corporate functions, and several Company committees assist in the governance of specific HR functional areas:

- **Role and Governance of Health and Insurance, Retirement Plan Design and Management, Wellness and Rewards Programs**

Total Rewards has the responsibility for the design, strategy, implementation and oversight of the governance and delivery of U.S. employee benefit programs. Total Rewards consults with the business units on employee benefit programs. Various outsourced providers provide recordkeeping and administrative services. Plan design and administration for international benefit programs is the responsibility of the business unit human resources staff in these business areas.

- Duke Energy Corporation's *Investment Committee* provides oversight for the investment of Duke Energy Corporation's pension and 401(k) assets, amounts held in its other benefit plan funding vehicles (including, but not limited to VEBAs established to hold ERISA plan assets and rabbi trusts established to fund non-qualified retirement plan benefits) and nuclear decommissioning assets.

- The Duke Energy *Benefits Committee* manages the day to day operations of benefit programs including, but not limited to:
  - o Interpretation of plan provisions
  - o Maintenance of proper records
  - o Preparation and distribution of plan material
  - o Monitoring the general administration and maintenance of the plans
  - o Compliance with government requirements on reports, returns and documents

- The Duke Energy *Claims Committee* serves as the Denied Claims Reviewer on issues as to whether an individual is eligible to participate in, or obtain coverage under, or whether an eligible individual is properly enrolled for participation in, or coverage under the benefits program. To the extent not delegated to a third-party service provider, the Claims Committee also serves as the Denied Claims Reviewer on all other issues under Duke Energy's pension, 401(k), health and insurance and nonqualified retirement plans.

- **Role and Governance of Compensation and Executive Compensation**

The general structure within Total Rewards for Compensation and Executive Compensation includes responsibility for:

- o Program and plan design, and strategy development
- o Overall guidance and oversight for compensation programs and processes
- o Executive compensation and benefits and for members of the Board of Directors
- o Day to day compensation management for employees

Duke Energy maintains a corporate governance structure to review and approve compensation actions and programs. The *Compensation Committee* of the Board of Directors provides oversight and approval for all Duke Energy executive compensation and benefits programs and has delegated certain compensation and long-term incentive grant approval authority to the Chairman, President and CEO. The Chairman, President and CEO has delegated authority to the CHRO to review and approve compensation within designated guidelines. The CHRO has delegated authority to the VP Total Rewards to review and approve compensation within designated guidelines.

The *Compensation Committee* of the Board of Directors establishes Duke Energy's overall executive compensation philosophy, provides oversight and approval for Duke Energy executive compensation and benefits programs, and individual compensation approval authority for executive officers.

- **Duke Energy/Aon Hewitt**
  The Duke Energy and Aon Hewitt relationship is managed and monitored through structured governance processes, service levels, and compliance and audit functions to ensure alignment of company strategies. Governance occurs at multiple levels, with executive involvement by both firms to ensure stakeholder alignment and clear escalation resolution paths. Established service levels are a reflection of Duke Energy's performance desires and are monitored frequently. Independent attestations of the control environment and Duke Energy audits are included in the contractual provisions.

- **Human Resources Advisory Council (HRAC)**
  The CHRO sponsors the Human Resources Advisory Council (HRAC). The Human Resources Advisory Council (HRAC) is in place to strengthen relationships between line management and HR and to serve as a sounding board on all substantive HR initiatives prior to their implementation. The HRAC ensures that HR strategies and initiatives are aligned with key business objectives, are fully vetted, and are recognized as adding value to the business.

The purview of the HRAC includes all HR and people-related initiatives including labor and union issues. HRAC meetings provide a forum to discuss enterprise-wide direction and approach related to operations and service delivery. However, it is not intended to be a performance monitoring or decision-making body.

The HRAC is comprised of the Chief Human Resources Officer and representative executive leaders from the enterprise.

The member Responsibilities include:
- Provide feedback on HR and certain communication plans, programs and practices
- Discuss and reach consensus on enterprise approaches to labor and employment matters
- Provide advocacy for Human Resources respective missions and priorities within the lines of business

VII.   Internal and External Communication

Internal
The primary communication vehicle between Human Resources and the Company occur via face-to-face internal communications within the individual business units, which occur frequently during the work day. Communications on topics relevant to other groups also occur in person daily. Significant changes occurring within the respective business units are reported at staff meetings.

Topics which apply to the entire organization are communicated through various corporate communication vehicles, such as the corporate portal, emails and targeted direct mailings addressing pertinent human resource issues.

Decisions on grievances, arbitration proceedings and significant issues affecting employees are communicated to the unions in writing per the terms of the respective Collective Bargaining Agreement

External
External communications with other departments are normally on a personal basis or by phone in order to provide the necessary services to the department. External communications also consist of oral communications with counterparts in other utilities, questionnaires, surveys, and participating in and attending professional association meetings, seminars and workshops and industry committee meetings. Other external communications consist of direct contact with human resources counterparts in other companies, as well as the governmental agencies.

HR Program Integration
The *Human Resources Program Integration* department, in conjunction with Corporate Communications, develops the appropriate materials and distribution methods to communicate pertinent HR information.

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VIII. Goal Attainment and Qualification

The primary assessment of goals occurs through the Business Planning Review (BPR) process. Key measurements are reported on an ongoing basis to SMC and ELT leadership within the Company via Fast Facts and Business Unit Specific Scorecards.

- **Fast Facts** – used for monthly routine monitoring, including current month and Year to Date actual results for:
  - Headcount by area, including employees and contingent workers
  - External hires
  - Terminations – voluntary, involuntary and retirements
  - Transfers
  - Promotions
  - Retention
  - Job Postings – internal and external
  - Overall employee diversity mix and comparisons
  - Span of control measurements
  - Age range
  - Length of service
  - Likely/eligible to retire

- **Scorecard** – a detailed monthly report that compares current state vs. enterprise or business unit/departmental pre-defined business targets that are designed to measure the high level achievement of corporate goals. Scores and comparative results are reported for:
  - Employee Survey:
    - Employee Engagement
    - Employee Enablement
  - Great Leaders:
    - % SMC/ELT Minority/Female Succession Candidates (Any Readiness Level)
    - % SMC/ELT Positions Filled Via Succession Plans
    - % SMC/ELT Positions with Ready Now Candidates
    - % Leadership Positions Filled Internally (First to Mid-Level)
  - Right Employees:
    - % Attrition 0-1 Years of Service
    - % Attrition 0-1 Year Service excluding Customer Call Center
    - % Regrettable Attrition 1-5 Years of Service
    - % Regrettable Attrition 1-5 Years of Service / excluding Customer Call Center
    - Minority/Female Attrition Compared to Overall Attrition
    - Minority/Female Attrition Compared to Overall Attrition Excluding Customer Call Center
    - % Employees with Developmental Plans
    - % Open Positions

- o Valued Pay and Benefits:
  - % of High Performers below 85% Compa Ratio
  - % Employees in position 2+ Years and at / or below 85% CR
- o Work Environment:
  - % Employee Escalations

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                          │   VP, Total Rewards & HR Ops     │
                          │ 23494 - Human Resources Operations│
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│Dir HR Sys Plng,│ │ Dir HR Services│ │Dir HR Special Projects│ │ Dir Retirement │
│Data Util&Rep  │ │20418 - HR Services│ │43398 - HR Merger │ │43395 - Retirement│
│19718 - HR Plng,│ │     (14)      │ │ Consolidation Proj│ │     (3)      │
│Data Utilization,│ │               │ │      (12)       │ │              │
│    PMO        │ │               │ │                 │ │              │
│     (8)       │ │               │ │                 │ │              │
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│Dir Executive │ │Dir Health & │ │Mng Dir-Total Rewards│
│Rewards       │ │Welfare      │ │33198 - HR        │
│23516 -       │ │41014 -      │ │     (14)         │
│Executive     │ │Health &     │ │                  │
│Rewards       │ │Welfare      │ │                  │
│    (10)      │ │    (5)      │ │                  │
└─────────────┘ └─────────────┘ └─────────────────┘
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VP, Total Rewards & HR Ops
23494 - Human Resources Operations
(74)

Administrative Support

Dir HR Sys Plng, Data Util&Rep
19718 - HR Plng, Data Utilization, PMO
(8)

Dir HR Services
20418 - HR Services
(14)

Dir HR Special Projects
43398 - HR Merger Consolidation Proj
(12)

Dir Retirement
43395 - Retirement
(3)

Dir Executive Rewards
23516 - Executive Rewards
(10)

Dir Health & Welfare
41014 - Health & Welfare
(5)

Mng Dir-Total Rewards
33198 - HR
(14)

DUKE ENERGY CORPORATION
DUKE ENERGY OHIO, INC.
SUMMARY OF MANAGEMENT POLICIES, PRACTICES & ORGANIZATION
POLICY, SUSTAINABILITY & STAKEHOLDER STRATEGY DEPARTMENT
SFR Reference: Chapter II (B)(9)(a)(i,vi,vii) Chapter II (B)(9)(d)(v)

I.   Policy and Goal Setting

The Policy, Sustainability and Stakeholder Strategy Department (PSSS or Department) has general charge of the formulation and advocacy of Duke Energy's policy positions that fall under the jurisdiction of government and regulatory agencies at the State and Federal levels. It is also responsible for internally managing issues and rulemakings and, maintaining relationships with appointed and elected officials, regulatory agency leadership, their staffs and many external stakeholders. PSSS reviews legislation, regulations, orders and issuances, filings, comments and proposals from various organizations and leads the development of relevant corporate policies and positions. In addition, PSSS is responsible for keeping executive management engaged and informed on the regulatory and competitive landscape, and specific issues that could impact the company.

Policies, procedures and practices established at the departmental level support implementation of corporate level policies. Each year the Vice President of Policy, Sustainability & Stakeholder Strategy requires that all direct reports use the Duke Energy Performance Management system to develop personal performance plans to align and measure departmental performance with corporate standards set by Duke Energy Leadership and the Board of Directors. Individual and team goals are set annually through a process which identifies weighted key success factors and measures at the beginning of the year and combines these substantive goals with behavioral and corporate financial goals, culminating in an achievement evaluation at the end of the year.

PSSS involves all department personnel, as well as solicits input from internal stakeholders when establishing goals within its area of responsibility. These goals meet the objectives established by the corporation and the Department. Final approval of the goals and policies rests with Senior Management.

II.   Strategic Planning

Strategic planning in the Department begins with a review and understanding of company strategic plans.   Strategic planning is coordinated between the leadership of PSSS and the various businesses whose interests the Department represents. PSSS personnel serve as points of contact for different executives and are charged with ensuring the executives are kept abreast of current issues, as well as ensuring the business interests of the executives' organizations are harmonized into Duke

Energy's policy positions. A participative process is used to identify strategic issues and to develop response plans. In addition, previous programs are reviewed and resources are allocated to meet those needs that remain a priority. The Department's plans are also informed by best practice research, industry benchmarking, and external sources are monitored for emerging issues that could have a significant impact on the company.

III. Organizational Structure

The PSSS Department is organized under the Vice President of Policy, Sustainability & Stakeholder Strategy. This position currently reports directly to the Executive Vice President and Chief Legal Officer who reports directly to the President and CEO of Duke Energy. Under the Vice President of PSSS there are four major functions: Federal Government Affairs, Energy & Environmental Policy and Sustainability, Environmental Affairs and Stakeholder Engagement, and FERC/Gas Policy.

The PSSS Department consists of thirty-four employees shown on the organizational chart attached as Exhibit PSSS-1.

IV. Responsibilities

Key PSSS Department responsibilities include:

- Leading the development of policy and regulatory strategy for the enterprise;
- Establishing, maintaining, and strengthening communications between the Company and its legislative, political and regulatory constituents, while following all legal requirements governing these relationships;
- Monitoring and tracking the actions and initiatives taken by state and federal agencies that could impact the regulatory landscape and policy, as well as company operations;
- Analyzing actions taken by policy makers, and when relevant to Duke Energy, providing executives summaries of relevant actions and Duke Energy's proposed responses;
- Advocating for constructive public policy outcomes that benefit the Company, its customers and shareholders;
- Leading Duke Energy's participation in energy and environmental matters such as: attending technical conferences, working with internal stakeholders to develop comments;
- Taking a leadership role in industry trade associations to help advance constructive policy outcomes on behalf of our customers and shareholders;
- Collaborating with internal and external stakeholders to harmonize business interests of the different internal stakeholders into a cohesive Duke Energy policy position through a collaborative process;

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- Administering the Company's Political Action Committee and its Grassroots network;
- Leading Duke Energy's sustainability initiatives, working with departments across the company to develop and implement, tracking and reporting on sustainability goals and plans;
- Communicating sustainability progress externally through publication of the annual sustainability report;
- Building a culture of sustainability, to influence the company to strike a balance across the needs of customers, shareholders and the environment; and
- Interfacing with the socially responsible investment community and other key non-governmental organizations.

V. Practices and Procedures

Departmental personnel maintain close working relationships with nearly all areas of the Company, and work with appropriate Company personnel to develop legislative and regulatory positions.

VI. Decision-Making and Control

Departmental decision-making and control are based on department goals and input from other departments. The department is involved in both proactive and reactive issues and consults frequently with management and expert technical personnel from other departments to determine appropriate responses. Day-to-day decision making is generally delegated to the directors, with major decisions rolling up to the VP of Policy, Sustainability and Stakeholder Strategy for input and concurrence. Corporate legal counsel is consulted on an as-needed basis.

VII. Internal and External Communication

The PSSS Department is the communication conduit of the company for external policy developments which need to be interpreted and communicated internally, and for company positions which need to be relayed to appropriate external organizations. External communications focus on elected officials, Administration officials, their respective staffs, trade associations of which the Company is a member, and other stakeholder groups including, but not limited to, environmental groups, labor unions, other utilities, political parties and organizations, etc. Timekeeping requirements and periodic education on restrictions such as *ex parte* communications, and reporting requirements assure compliance with all applicable rules and regulations regarding external communications with lawmakers and regulatory bodies.

The Sustainability staff produces a variety of internal employee communications materials, and information on the company's sustainability programs that is maintained on the employee portal. The Sustainability page on the company's

Website provides information on the company's sustainability programs. An annual sustainability report is produced for the many stakeholders who are interested in Duke Energy's economic, environmental and social performance. The process used to develop the report is has been audited by Corporate Audit Services to ensure data included in the report on a sample basis is accurate. The Sustainability staff members department also works closely with the Corporate Communications department to issue news releases as appropriate.

Corporate activities and issues are relayed from the Vice President to the department employees at regular staff meetings, and information is exchanged about emerging issues internally and externally. Frequent formal and informal lines of communication are also maintained with other personnel throughout the Company. Individual PSSS team meetings are held with all personnel to share ideas, disseminate information on Company activities, address various administrative needs, enhance creativity and productivity, and foster a positive working environment.

For all PSSS personnel, internal communication is encouraged with personnel throughout the Company whose departments are affected by the various legislative and regulatory policies and proposals that are being analyzed. Teams are utilized as needed to facilitate inter-departmental communication. Most activities will affect more than one segment of the Company, so continual and timely communication with the appropriate personnel throughout the Company is essential.

VIII.   Goal Attainment and Qualification

Performance is evaluated on an individual basis through annual review of how well individual employees met their key accountabilities and goals, as well as their contribution to the departmental goals. Achievement of constructive policy outcomes, achievement of objective and subjective goals, and internal customer satisfaction are used as evaluation criteria. When possible, the financial impact of those policy outcomes or the contribution of those outcomes to the overall strategy is captured. Feedback from internal and external stakeholders about communication channels, collaboration and specific projects is also sought.

Departmental level goals are also used in addition to corporate goals in the employee short-term performance program. At the end of the calendar year, the Vice President of Policy, Sustainability and Stakeholder Strategy submits supporting evidence and reports on whether or not each of the department goals was met. The Executive Vice President, in consultation with the Senior Management Committee and CEO, assesses whether or not each department goal was met and if the goal is deemed to be met, to what extent (minimum, target, maximum).
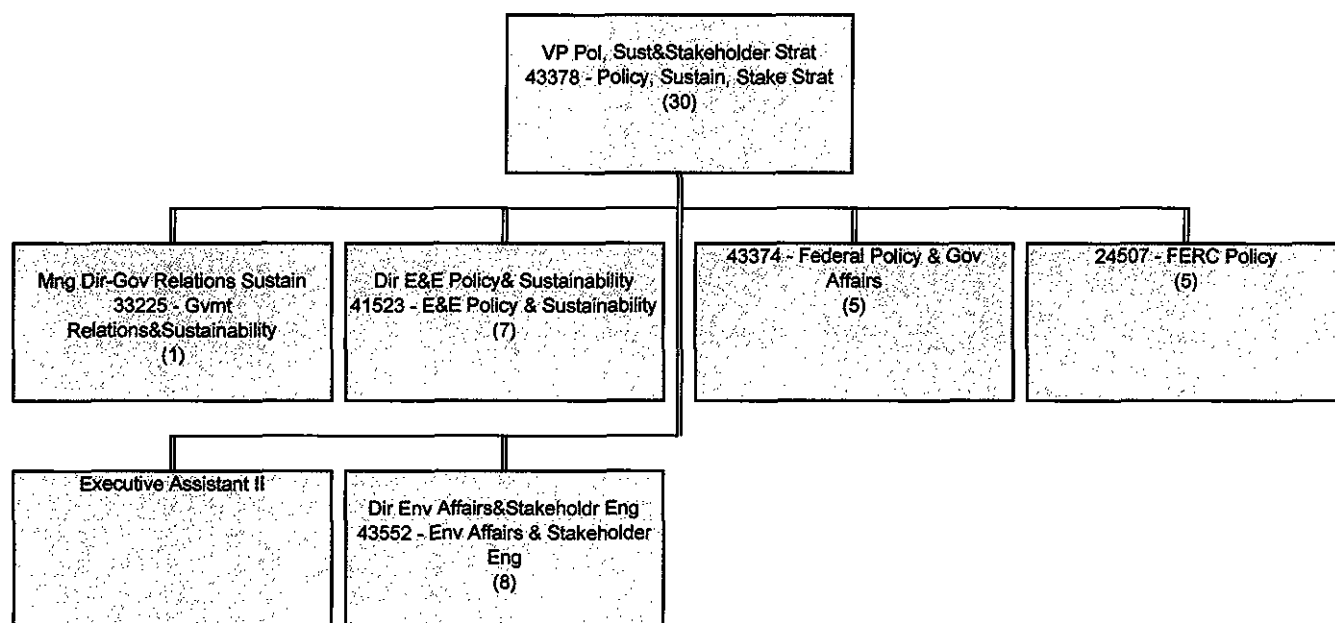
VP Pol, Sust&Stakeholder Strat
43378 - Policy, Sustain, Stake Strat
(30)

Mng Dir-Gov Relations Sustain
33225 - Gvmt
Relations&Sustainability
(1)

Dir E&E Policy& Sustainability
41523 - E&E Policy & Sustainability
(7)

43374 - Federal Policy & Gov
Affairs
(5)

24507 - FERC Policy
(5)

Executive Assistant II

Dir Env Affairs&Stakeholdr Eng
43552 - Env Affairs & Stakeholder
Eng
(8)

DUKE ENERGY CORPORATION
DUKE ENERGY OHIO, INC.
SUMMARY OF MANAGEMENT POLICIES, PRACTICES AND ORGANIZATION
CUSTOMER SERVICES (CS)
SFR Reference: Chapter II (B)(9)(d)(i, ii, iii, iv, v)

I.   <u>Policy and Goal Setting</u>

Customer Services (CS) supports all established corporate policies through department directives, procedures and practices. In addition, policies issued by the Federal Energy Regulatory Commission (FERC), state regulatory commissions and Duke Energy's Code of Business Ethics (CoBE) are documented, supported and followed within the CS organization.

Departmental policies are normally communicated to the leadership teams at department staff meetings and then shared with the appropriate level of employees in smaller group or individual meetings to ensure understanding of the policies and their importance in relation to serving customers and in maintaining compliance. Policies and procedures are documented and made available in manuals, on the CS and Company Portals and in various knowledge management tools.

CS develops an annual business plan that describes, for a three-year planning period, the activities required to support the corporate strategy. This plan outlines the resources needed to support basic operations (billing, customer contact, communication, service, meter reading etc.). Key issues that could impact the organization are identified and strategies to mitigate risks associated with the issues are outlined.

The CS leadership team conducts a monthly review of business plan progress and objectives. CS leadership also reviews progress with the CEO and other executive leadership on an as-needed basis.

II. <u>Strategic Planning</u>

In developing the CS Business Plan, CS leadership reviews corporate objectives as well as customer and employee feedback to define initiatives that are to be accomplished over a period of 18 to 36 months. The business plan includes prioritized action steps to achieve the initiatives as well as milestones and timelines to support success.

An example of a strategic initiative within the CS Business Plan is the development of a standard service model for small Commercial and Industrial customers. The Small and Medium Business organization has been recently formed within CS to

develop a tailored approach to better meeting the service and support needs of small and medium sized business customers of Duke Energy.

Another example of strategic planning is the focus on meeting or exceeding customers' evolving expectations of "basic utility service." The Customer Care Operations team uses transactional surveys to guide the development of additional services that the Company can use to improve service and reduce costs. As customer data is analyzed, results and recommendations are developed; decisions are made and factored into the strategic plan.

A final example is the enhancement of the IVR channel which entails developing a portfolio of IVR options to better serve our customers. In addition, the current CS technology plan details various technology enhancements that will take place to serve customers more efficiently and effectively.

III.   Organization Structure

Customer Services is led by a senior vice president who reports to the EVP Customer and Delivery Operations & President, Carolinas of Duke Energy. The department is divided into five areas: Customer Care Operations; Revenue Services; Metering Services; Small and Medium Business; Large Business Customer and Customer Experience-PNG. Each area is led by a vice president or general manager who reports directly to the senior vice president. The CS organization chart is provided in attachment Exhibit CS-1.

IV.   Responsibilities

The major responsibilities of CS include the following:

Customer Care Operations

Customer Care Operations manages the following responsibilities:

- Handle customer inquiries made via telephone, e-mail, fax, etc.
- Resolve residential and small/medium business customer transactions related to a wide variety of billing and service matters, adjustments and gas/electric trouble calls.
- Handle requests from builders and contractors regarding preliminary gas and/or electric service matters such as inspections, new meter installations, etc.
- Complete or route general inquiries made via publicly-published telephone and web communication channels.
- Resolve exception inquiries and requests (e.g., police/fire).

<u>Revenue Services</u>

The Revenue Services area performs the following functions in the Company's retail revenue process:

Billing

- Render timely and accurate bills.
- Resolve usage/billing exceptions accurately and timely, including the daily and monthly validation of digital meters.
- Support other departments with billing information necessary to aid in resolving customer inquiries.
- Maintain proper controls to ensure all accounts are billed as scheduled.
- Update and maintain all rate, rider and billing system tables used to calculate billing and report revenue.

Credit & Collections

- Establish and implement credit and collection policies, in compliance with state regulatory requirements.
- Take action on past due accounts.
- Investigate and initiate billing and collection actions in cases of fraud and meter tampering
- Administer Percentage of Income Payment Plan (PIPP), medical certification and life support programs.
  o Life Support program helps to ensure careful handling of accounts where disconnection of electric service for past-due bills could adversely affect the well-being of an occupant.
- Maintain proper controls to ensure all accounts are identified, secured, notified and collected.
- Work with PUCO and Ohio Consumers' Counsel (OCC) to provide required reports such as the Customer Information Reports (CIR) and PIPP metrics reports.

Payments

- Process and apply payments to customer accounts in a timely manner.
- Validate that system controls operate appropriately and effectively.
- Administer, apply, and collect agency payments (vouchers, PIPP intents, etc.).
- Manage pay agents who collect customer payments at local retail locations.

Metrics, Reporting & Compliance

- Maintain proper account records and controls to ensure the integrity of reported gas and electric usage.
- Provide accurate and thorough reporting and control processes to all departments supporting billing, payments, receivables and other financial activity.
- Monitor and maintain billing system processes, parameters and security to ensure adherence to internal guidelines and external regulations/compliance.
- Manage business relationships with gas and electric suppliers participating in Duke Energy Ohio's Customer Choice programs.
- Perform Customer Choice back office operations.

Metering Services

Meter Services is functionally aligned with regional expertise and resources. It is composed of the following functions:

- Meter Reading - Responsible for managing meter routes and safely collecting energy usage data through mobile (drive-by) and manual (walk-by) meter reading methods.
- Meter Labs – Testing, maintenance, certification of meters; testing and certification of metering equipment such as CTs, PTs, tests kits, test boards; Accountable for all meter inventory. Tests and repairs equipment for Distribution and Transmission including voltage detectors, underground fault detectors, provisioning and maintenance of Distribution electronic devices including reclosers, regulators, capacitor bank controllers.
- Field Metering – Includes installing, maintaining, and testing meters in the field, primarily transformer-rated meter points, supports implementation and maintenance of new technologies from Grid Solutions organization. Investigates high bill complaints and Commission complaints.
- Meter Engineering Support – Includes establishing the standards for all metering related products, establishing meter related processes and procedures, responsible for managing regulatory testing programs, product evaluation, driving consistency across enterprise.
- Revenue Protection – Responsible for finding and deterring energy theft. Responsible for identifying, investigating, and collecting lost revenues resulting from theft and cases of fraud.

Small and Medium Business

The Small and Medium Business organization has been recently formed to develop a tailored approach to better meeting the service and support needs of small and medium sized business customers of Duke Energy.

Large Business Customer

The Large Business Customer organization provides customer service and customer relationship management and planning for Duke Energy's largest manufacturing, commercial and institutional customers. This involves joint business and strategic planning to achieve enhanced energy efficiency.

Customer Care Operations

Customer Care Operations manages the following responsibilities:

- Handle customer inquiries made via telephone, e-mail, fax, etc.
- Resolve residential and small/medium business customer transactions related to a wide variety of billing and service matters, adjustments

Revenue Services

The Revenue Services area performs the following functions in the Company's retail revenue process:

Billing

- Render timely and accurate bills.
- Resolve usage/billing exceptions accurately and timely, including the daily and monthly validation.
- Support other departments with billing information necessary to aid in resolving customer inquiries.
- Maintain proper controls to ensure all accounts are billed as scheduled.
- Update and maintain all rate, rider and billing system tables used to calculate billing and report revenue.

Credit & Collections

- Establish and implement credit and collection policies, in compliance with state regulatory requirements.
- Take action on past due accounts.
- Investigate and initiate billing and collection actions in cases of fraud and meter tampering.
- Administer Percentage of Income Payment Plan (PIPP), medical certification and life support programs.

- Maintain proper controls to ensure all accounts are identified, secured, notified and collected.

Payments

- Process and apply payments to customer accounts in a timely manner.
- Validate that system controls operate appropriately and effectively.
- Administer, apply, and collect agency payments (vouchers, PIPP intents, etc.).

Metrics, Reporting & Compliance

- Maintain proper account records and controls to ensure the integrity of reported gas.

- Provide accurate and thorough reporting and control processes to all departments supporting billing, payments, receivables and other financial activity.

- Monitor and maintain billing system processes, parameters and security to ensure adherence to internal guidelines and external regulations/compliance.

V. Practices and Procedures

CS develops operating procedures with supporting input from departments with which CS interacts. These departments include Meter Operations, Regulatory Compliance, Legal, Finance, Corporate Communications, Information Technology, and Gas Operations. Operational procedures are provided to office and field workforces. Day-to-day operational decisions are made by the respective leadership as these decisions affect normal operations.

Unusual problems and events not covered by existing procedures are discussed with department leadership, who inform other company leaders of the impact on overall operations; changes are documented accordingly.

VI. Decision Making and Controls

Day-to-day decisions, as they pertain to the various jobs in CS, are normally made by the employees performing the work; guidelines are in place to assist employees. Guidelines are communicated to employees through online or printed manuals and departmental procedures. Each management level has a specific delegation of authority for approving business transactions. Employees' decisions are supervised to ensure decisions are consistent with policies and procedures. Decisions requiring additional levels of approval are escalated to appropriate levels of management within and outside CS leadership.

The following examples illustrate controls that assist the department supervisory staff in determining that various systems and procedures function properly:

- The Customer Care Operations telephone system generates reports that enable leadership to tabulate each customer representative's activities. In addition, Customer Care supervisors measure group productivity and effectiveness with this data.
- An employee must have documented approval from his/her supervisor to make an adjustment that is beyond the employee's authority including adjustments to a customer's accounts.
- Controls exist that limit customer system access to authorized users.
- Scheduled work is monitored for timely completion or escalated follow up. Examples include customer meter move orders and gas/electric trouble calls.
- All new system code releases must be tested and approved prior to release.
- Sarbanes Oxley controls are in place for any systems/processes that affect payments to/from customers and financial reporting.
- Project Governance requires all CS projects to have business case justification and approval before starting. The PMOs provide industry standard PMO controls similar to those suggested by the Project Management Institute (PMI). The PMOs exercise governance, control and oversight across multiple business units and divisions that have key roles in the execution of program initiatives.

In addition, various internal manual and electronic systems enable the department to develop better workforce performance measures and to utilize the system to identify training opportunities.

VII. Internal and External Communication

CS communicates with employees through meetings, e-mail, the Company Portal and its department sub site, departmental newsletters, state president updates and written procedures. In addition, bulletin boards and monitors are strategically located throughout the department. Periodically, department and Company leadership conducts meetings to provide employees with important information and to have open dialogue with employees.

External communication occurs through a variety of channels including the following:

- Letters to customers
- Bill messages/inserts
- Media (TV, radio, newspapers, publications, etc.)
- Attendance at public hearings and meetings

7

- Presentations at community meetings, agencies, rotary clubs, city council meetings
- Volunteer work in the community
- Membership in professional and civic organizations
- Electronic communications (e-mail, web, Facebook, Twitter, etc.)
- Automated Phone Service
- Telephone contact
- Contact with regulators and other agencies at our Ohio Collaborative meetings
- Focus groups

VIII.   <u>Goal Attainment and Qualification</u>

CS actively monitors and measures the success of the organization toward delivering on key objectives. Financial and operational results for all of the CS functional areas are measured. These measures are intended to be flexible and change as business drivers' change.

In addition, CS uses various statistical reports as a means of measuring department operational effectiveness. Some of the reports serve the dual purpose of measuring goal attainment as well as being control devices.

Many process improvement initiatives are driven by the results of our various customer satisfaction surveys. Most surveys ask customers to rate Duke Energy on a scale of 0 to 10. The score is measured as a percent of customers rating Duke Energy an 8, 9 or 10 on the 0 to 10 scale.

<u>Residential Transactional Survey</u>

Telephone interviews are conducted with residential customers who contact Duke Energy for the following transactions:

- Turn on or transfer electric service
- Turn on or transfer gas service
- Report a power outage
- Call Duke Energy with a billing question

A third-party company contacts the customer within seven days of the completed transaction. The surveys measure satisfaction with the entire experience.

<u>Residential Customer Perceptions Tracker (CPT) Survey</u>

A third-party conducts monthly telephone interviews with a random sample of residential customers who are asked to rate their overall satisfaction with Duke Energy. Duke Energy's overall satisfaction score is measured as the percent of

customers responding with an 8, 9, or 10 on a 0 to 10-point scale. The results of the customers' responses to questions regarding drivers of customer satisfaction (e.g., reliability, price, billing, communications, company image), are also reported.

Small Business Customer Perceptions Tracker (CPT) Survey

A third party conducts monthly telephone interviews with a random sample of small business customers (defined as Tier 3 Unassigned through Tier 10) who are asked to rate their overall satisfaction with Duke Energy. Duke Energy's overall satisfaction score is measured as the percent of customers responding with an 8, 9, or 10 on a 0 to 10-point scale. The results of the customers' responses to questions regarding drivers of customer satisfaction (e.g., reliability, price, billing, communications, company image), are also reported.

Large Business Customer Perceptions Tracker (CPT) Survey

Quarterly online surveys are conducted with Tier 1 and Tier 2 Assigned customers. Duke Energy's overall satisfaction score is measured as the percent of customers responding with an 8, 9, or 10 on a 0 to 10-point scale. The results of the customers' responses to questions regarding drivers of customer satisfaction (e.g., reliability, price, billing, communications, company image, account management), are also reported.

J.D. Power and Associates Surveys

The J.D. Power Electric Utility Residential Study calculates overall customer satisfaction based on six performance areas: (1) corporate citizenship, (2) price; (3) power quality and reliability; (4) billing and payment; (5) customer service and 6) communications.

The J.D. Power Electric Utility Business study calculates overall customer satisfaction based on six performance areas: (1) corporate citizenship, (2) price; (3) power quality and reliability; (4) billing and payment; (5) customer service and 6) communications.

CS uses other methods to formally and informally quantify and monitor customer service and operational performance. Examples include Call Center quality assessments, technology system incident reports, Call Center productivity reports, social media metrics reports and technical health reports.

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                      ┌─────────────────────────┐
                      │   SVP, Customer Solutions│
                      │ 24960 - Customer Solutions│
                      │          (436)           │
                      └─────────────────────────┘
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SVP, Customer Solutions
24960 - Customer Solutions
(436)

Dir Rate Design&Analysis
43545 - Rate Design Analysis
(17)

GM Cust Reg Strategy&Analytics
23905 - Customer Programs
(34)

VP Retail Programs
43582 - Cust Sol Products &
Services
(340)

Executive Assistant II

Dir Bus Analysis & Projects
24807 - Customer Experience
Program
(1)

Dir Enhanced Basic Services
25442 - Enhanced Basic Services
(1)

GM Market Solutions Analytics
25265 - Market Solutions Analytics
(36)

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┌─────────────────────────────┐
│   Dir Rate Design&Analysis   │
│  43545 - Rate Design Analysis │
│              (17)             │
└─────────────────────────────┘
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Dir Rate Design&Analysis
43545 - Rate Design Analysis
(17)

Manager Load Research
42017 - Load Research
(7)

Manager Rates&Reg Strategy
22569 - Pricing & Rate Ops -
Southeast
(3)

Pricing and Rate Ops - Midwest
(4)

Rates&Reg Strategy Dir

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                    ┌─────────────────────────────────┐
                    │  GM Cust Reg Strategy&Analytics  │
                    │   23905 - Customer Programs      │
                    │            (34)                  │
                    └─────────────────────────────────┘

┌──────────────────────┐  ┌──────────────────────┐  ┌──────────────────────┐  ┌──────────────────────┐
│ Strategy & Collaboration Dir │ │ Sr Strategy&Collaboration Mgr │ │ Sr Strategy&Collaboration Mgr │ │ Sr Strategy&Collaboration Mgr │
│ 25411 - MS Regulatory Strategy - │ │                      │ │                      │ │                      │
│           FL         │ │                      │ │                      │ │                      │
│           (1)        │ │                      │ │                      │ │                      │
└──────────────────────┘  └──────────────────────┘  └──────────────────────┘  └──────────────────────┘

┌──────────────────────┐  ┌──────────────────────┐  ┌──────────────────────┐  ┌──────────────────────┐
│ Director Program Performance │ │ Strategy & Collaboration Mgr │ │ Sr Strategy&Collaboration Mgr │ │  Director Analytics  │
│ 44579 - Program Performance │ │                      │ │                      │ │ 44025 - Planning & Analytics │
│           (10)       │ │                      │ │                      │ │          (15)        │
└──────────────────────┘  └──────────────────────┘  └──────────────────────┘  └──────────────────────┘
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VP Retail Programs
43582 - Cust Sol Products & Services
(340)

Mng Dir CustEfficiencyPrograms
24980 - Customer Efficiency
Programs
(125)

Interim Assignment - Leader
44021 - Energy Services
(32)

Director Outdoor Lighting
44014 - Outdoor Lighting
(31)

Mgng Dir Business Development
25643 - RP-Business Development
(23)

Dir Demand Response Ops
44017 - Demand Response
(36)

Dir Residential Solutions
44018 - Residential Solutions
(46)

Dir Retail Customer Strategy
44022 - Customer Ping Retail
Strategy
(9)

Dir Innovation Management
44020 - Innovation Management
(29)

Executive Assistant I

Dir Bus Analysis & Projects
24807 - Customer Experience
Program
(1)

CSS Sr Business Analyst

45842 - Proj Mgmt & Process
Improve 2
(0)

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                          ┌─────────────────────────────┐
                          │  GM Market Solutions Analytics│
                          │ 25265 - Market Solutions Analytics│
                          │             (36)              │
                          └─────────────────────────────┘

┌──────────────────┐  ┌──────────────────┐  ┌──────────────────────┐  ┌──────────────────────┐
│ Sr Project Manager│  │Director Grid Analytics│ │Mgr Market Research & Analysis││Dir Modeling & Advncd Analytic│
│                  │  │ 25080 - Grid Analytics│ │ 23951 - Market Research &  ││ 25410 - Modeling & Advanced │
│                  │  │        (8)       │  │       Analysis        │  │       Analytics       │
│                  │  │                  │  │         (4)           │  │         (4)           │
└──────────────────┘  └──────────────────┘  └──────────────────────┘  └──────────────────────┘

┌───────────────────────────┐  ┌──────────────────────────┐  ┌──────────────────────────┐
│Dir Cust Satisfaction&Mkt Resr│ │ Dir Cross Function Analytics│ │Mgr-Research&Cust Program Dev│
│ 44024 - Market Research    │  │25510 - Cross Function Analytics│ │33278 - Marketing&Bus Support│
│           (8)              │  │          (3)             │  │           Svcs             │
│                            │  │                          │  │           (2)              │
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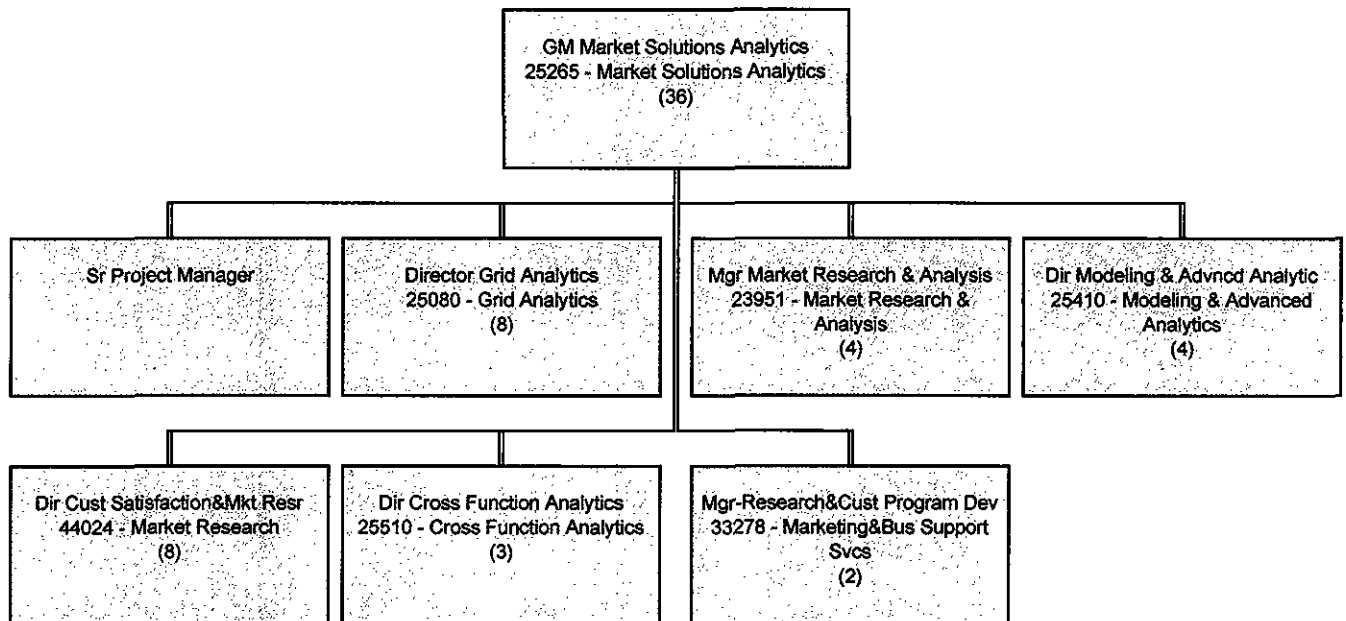
DUKE ENERGY CORPORATION
DUKE ENERGY OHIO, INC.
SUMMARY OF MANAGEMENT POLICIES, PRACTICES AND ORGANIZATION
CUSTOMER SOLUTIONS (CS)
SFR Reference: Chapter II (B)(9)(d)(i, ii, iii, iv, v)

I.   Policy and Goal Setting

Customer Solutions (CS) supports all established corporate policies through department directives, procedures and practices. In addition, policies issued by the Federal Energy Regulatory Commission (FERC), state regulatory commissions and Duke Energy's Code of Business Ethics (CoBE) are documented, supported and followed within the CS organization.

Departmental policies are normally communicated to the leadership teams at department staff meetings and then shared with the appropriate level of employees in smaller group or individual meetings or online training to ensure understanding of the policies and their importance in relation to serving customers and in maintaining compliance. Policies and procedures are documented and made available in manuals, on the Company Portal and in various knowledge management tools.

CS develops plans as input to the Regulated Utilities Plans that describe, for a three-year planning period, the activities required to support the Regulated Utility (RU) strategy: most directly by offering valued products and services and basic customer services.
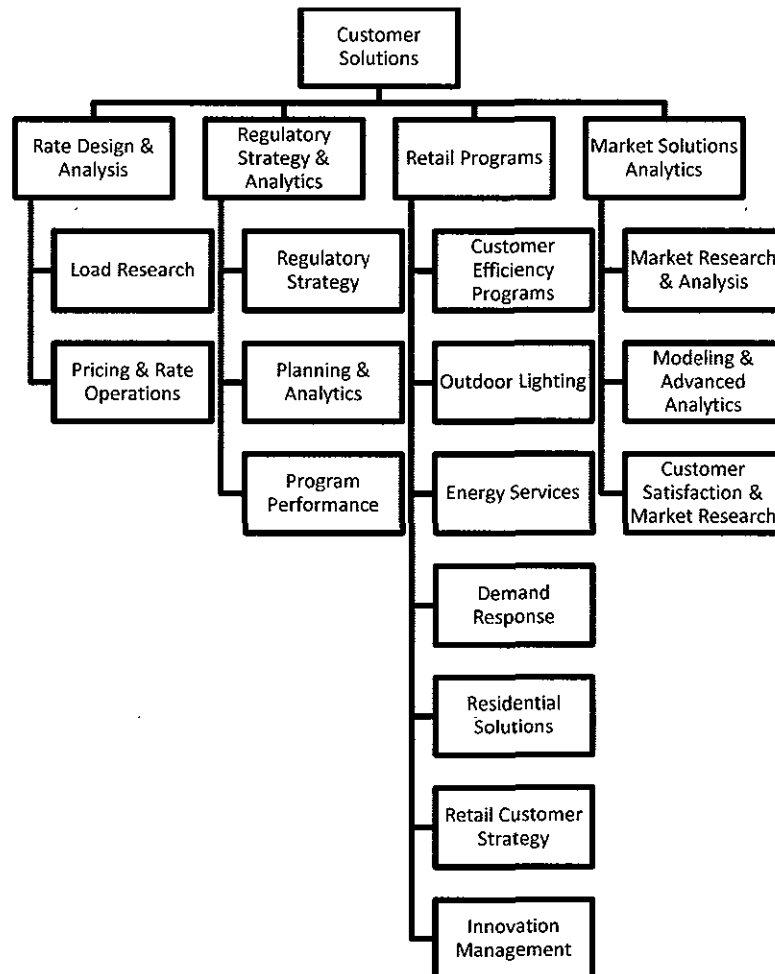
II.   Strategic Planning

In developing the RU Business Plan, leadership reviews corporate objectives as well as customer and employee feedback to define initiatives that are to be accomplished.

An example of strategic planning is the use of customer satisfaction transactional surveys to guide development of additional services that the Company can use to improve service and reduce costs. As customer data is analyzed, results and recommendations are developed; decisions are made and factored into the strategic plan.

III.   Organization Structure

Customer Solutions is led by a senior vice president who reports to the EVP Market Solutions and President Carolinas Region who reports to the CEO of Duke Energy. The department is divided into five areas: Retail Programs,

Customer Regulatory Strategy & Analytics, Rate Design and Analysis, Customer Experience, Market Solutions Analytics. Each area is led by a vice president or director who reports directly to the senior vice president. The CS organization chart is provided below.

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                            Customer
                            Solutions
                                |
   ┌────────────┬──────────────┼──────────────┬──────────────┐
Rate Design &  Regulatory    Retail Programs  Market Solutions
Analysis       Strategy &                     Analytics
               Analytics
   |              |              |                  |
Load Research  Regulatory     Customer          Market Research
               Strategy       Efficiency        & Analysis
                              Programs
   |              |              |                  |
Pricing & Rate Planning &     Outdoor Lighting  Modeling &
Operations     Analytics                        Advanced
                                                Analytics
                  |              |                  |
               Program        Energy Services    Customer
               Performance                       Satisfaction &
                                                 Market Research
                               |
                            Demand
                            Response
                               |
                            Residential
                            Solutions
                               |
                            Retail Customer
                            Strategy
                               |
                            Innovation
                            Management
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IV.   Responsibilities

The major responsibilities of CS include the following:

Rate Design and Analysis:

- Provides corporate-wide strategy development for pricing and rate design, conducts industry research, assesses trends regarding pricing and rate design, all to support overall corporate goals.
- Oversees various compliance filings with state regulators while maintaining quality and creativity.

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- Supports the pricing and rate design aspects of rate case planning and execution to ensure success, including the filing of testimony, representing Company positions, testifying, and responding to interrogatories. Develops and maintains appropriate relationships with regulators.
- Supports the President's organizations and other departments such as Energy Efficiency, Economic Development, Large Business, and SmartGrid on issues of pricing and rate design. Provides pricing support for new products and services. Collaborates with internal parties to fully accomplish goals.
- Oversees the development, analysis, and interpretation of jurisdictional load research. Conducts various studies in support of Company initiatives.
- Develops organizational bench strength and improves each employee's skills through a combination of coaching, providing feedback, job rotation, cross training, and formal training. Provides one-on-one coaching, develops expectations, and writes performance appraisals. Ensures that all key work functions have an identified, capable, and trained backup.

Customer Regulatory Strategy and Analytics:

- Provides regulatory strategy and coordinates the preparation of filings to gain approval to offer different products and services to customers.
- Manages the company's efforts to demonstrate regulatory compliance obligations with respect to Demand Side Management and Energy Efficiency.
- Leads Company's efforts to engage external stakeholders related to the Company's Demand Side Management (DSM) and Energy Efficiency (EE) efforts.
- Provides all of the performance monitoring of the Company's EE and DSM Programs that are used for internal program management and external reporting.
- Manages independent third-party Evaluation, Measurement and Verification of EE and DSM programs.
- Provides economic modeling to demonstrate the justification (cost effectiveness) of EE and DSM programs and forecast long-term EE and DSM levels.

Retail Programs:
- Includes five lines of businesses:
  - Outdoor Lighting – Provides efficient and innovative outdoor lighting solutions.
  - Energy Efficiency – Provides solutions to enable customers to reduce costs and improve energy efficiency.
  - Residential Solutions – Provides customers with products and services that offer comfort, convenience and peace of mind.
  - Energy Services – Provides electric reliability and energy-related services.
  - Demand Response – Delivers reliable capacity through customer engagement.
- Proactively enhances the energy relationship through being the customer's expert guide and an evolving portfolio of valued products and services.

Market Solutions Analytics

- Provides customers data and analytics support for marketing campaign managers, program managers, product managers and retail sale strategy group.
- Provide internal consulting role to business leaders on program/products design, vendor selection, campaign coordination, and process automation.
- Develop data analytics capability and deliver advanced analytics solutions that can enable the exploitation of new business opportunities to grow our business, drive business operations to greater levels of efficiency, as well as deliver tangible value to customers and raise customers satisfaction.
- Democratize advanced analytics: Leverage our team's in-depth business process knowledge, expertise in technology, extensive experience in developing data analytics tools, and ability for working effectively and proactively with people across different organizations, in order to bring sophisticated and powerful solutions to the masses – normal business users, and not just statisticians or those with extensive training in advanced analytics.
- Build a dynamic organization of highly skilled analytics processionals such as data scientist, solution architect, data science consultant and quantitative modelers to deliver the powerful analytics solutions for both customer and operational solutions. Examples are (but not limited

to) revenue protection, enhanced customer journey, and optimized customer operations.

V. Practices and Procedures

CS develops operating procedures with supporting input from departments with which CS interacts. These departments include Regulatory Compliance, Legal, Finance, Corporate Communications, Information Technology, Gas Operations and Meter Reading. Operational procedures, such as safety, are provided to office and field workforces. Day-to-day operational decisions are made by the respective leadership as these decisions affect normal operations.

Unusual problems and events not covered by existing procedures are discussed with department leadership, who inform other company leaders of the impact on overall operations; changes are documented accordingly.

VI. Decision Making and Controls

Day-to-day decisions, as they pertain to the various jobs in CS, are normally made by the employees performing the work. Each management level has a specific delegation of authority for approving business transactions. Employees' decisions are supervised to ensure decisions are consistent with policies and procedures. Decisions requiring additional levels of approval are escalated to appropriate levels of management within and outside CS leadership.

VII. Internal and External Communication

CS communicates with employees through meetings, e-mail, the Company Portal and its department sub site, *This Week @ Duke Energy* newsletter, state president updates and written procedures. Periodically, department and Company leadership conducts meetings to provide employees with important information and to have open dialogue with employees.

External communication occurs through a variety of channels including the following:

- Letters to customers
- Bill messages/inserts
- Media (TV, radio, newspapers, publications, etc.)
- Emails
- Attendance at public hearings and meetings
- Presentations at community meetings, agencies, rotary clubs, city council meetings
- Volunteer work in the community
- Membership in professional and civic organizations

- Electronic communications (e-mail, web, Facebook, Twitter, etc.)
- Telephone contact
- Contact with regulators and other agencies at our Ohio Collaborative meetings
- Focus groups

VIII. Goal Attainment and Qualification

CS actively monitors and measures the success of the organization toward delivering on key objectives. Financial and operational results for all of the CS functional areas are measured. These measures are intended to be flexible and change as business drivers' change.

In addition, CS uses various statistical reports as a means of measuring department operational effectiveness. Some of the reports serve the dual purpose of measuring goal attainment as well as being control devices.

Many process improvement initiatives are driven by the results of our various customer satisfaction surveys. Most surveys ask customers to rate Duke Energy on a scale of 0 to 10. The score is measured as a percent of customers rating Duke Energy an 8, 9 or 10 on the 0 to 10 scale.

Residential Transactional Survey

Telephone interviews are conducted with residential customers who contact Duke Energy for the following transactions:

- Turn on or transfer electric service
- Turn on or transfer gas service
- Report a power outage
- Call Duke Energy with a billing question

A third-party company contacts the customer within seven days of the completed transaction. The surveys measure satisfaction with the entire experience.

Residential Customer Perceptions Tracker (CPT) Survey

A third-party company conducts monthly telephone interviews with a random sample of residential customers who are asked to rate their overall satisfaction with Duke Energy. Duke Energy's overall satisfaction score is measured as the percent of customers responding with an 8, 9, or 10 on a 0 to 10-point scale. The results of the customers' responses to questions regarding drivers of customer satisfaction (e.g., reliability, price, billing, communications, company image), are also reported.

Small Business Customer Perceptions Tracker (CPT) Survey

A third-party company conducts monthly telephone interviews with a random sample of small business customers (defined as Tier 3 Unassigned through Tier 10) who are asked to rate their overall satisfaction with Duke Energy. Duke Energy's overall satisfaction score is measured as the percent of customers responding with an 8, 9, or 10 on a 0 to 10-point scale. The results of the customers' responses to questions regarding drivers of customer satisfaction (e.g., reliability, price, billing, communications, company image), are also reported.

Large Business Customer Perceptions Tracker (CPT) Survey

Quarterly online surveys are conducted with Tier 1 and Tier 2 Assigned customers. Duke Energy's overall satisfaction score is measured as the percent of customers responding with an 8, 9, or 10 on a 0 to 10-point scale. The results of the customers' responses to questions regarding drivers of customer satisfaction (e.g., reliability, price, billing, communications, company image, account management), are also reported.

J.D. Power and Associates Surveys

The J.D. Power Electric Utility Residential Study calculates overall customer satisfaction based on six performance areas: (1) corporate citizenship, (2) price; (3) power quality and reliability; (4) billing and payment; (5) customer service and 6) communications.

The J.D. Power Electric Utility Business study calculates overall customer satisfaction based on six performance areas: (1) corporate citizenship, (2) price; (3) power quality and reliability; (4) billing and payment; (5) customer service and 6) communications.

CS uses other methods to formally and informally quantify and monitor customer service and operational performance. Examples include Call Center quality assessments, technology system incident reports, Call Center productivity reports, social media metrics reports and technical health reports.