

**BEFORE
THE OHIO POWER SITING BOARD**

In the Matter of the Application of Birch Solar)
1, LLC for a Certificate of Environmental)
Compatibility and Public Need to Construct a) Case No. 20-1605-EL-BGN
Solar-Powered Electric Generation Facility in)
Allen and Auglaize Counties, Ohio.)

DIRECT TESTIMONY OF

**Derek Brown
Vice President
Solar Market Leader
Kleinfelder Group, Inc.**

**on behalf of
Birch Solar 1, LLC**

May 4, 2022

/s/ Christine M.T. Pirik

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1 **1. Please state your name, current title, and business address.**

2 My name is Derek Brown. My title with Kleinfelder Group, Inc. (“Kleinfelder”) is Vice
3 President, Solar Market Leader. I am assigned to Kleinfelder’s Denver office which is
4 located at 707 17th Street, Suite 3000, Denver, CO 80202.

6 **2. Please summarize your educational background and professional experience.**

7 I received a Master of Science in Civil Engineering from the University of Washington
8 after graduating from the United States (“U.S.”) Air Force Academy. I served as a civil
9 engineer in the Air Force for 9-years managing large-scale infrastructure programs within
10 the U.S. and abroad. These projects involved a wide variety of facility and project types
11 including medium and high voltage electrical systems. Following my last duty assignment,
12 teaching civil engineering at the Air Force Academy, I transitioned to the private sector
13 where I worked for Mortenson Construction. Over a 10-year period and separate 8-year
14 period, I worked as a project engineer, project manager, design manager, and project
15 executive on a wide range of projects similar to the types of projects I managed in the Air
16 Force. This experience also included 6-years of heavy civil construction and program
17 management experience at the Stapleton Airport Redevelopment, and 5-years of renewable
18 energy (wind) project management. Through these roles, I gained substantial technical
19 experience with heavy civil, infrastructure, and renewable energy projects. This
20 experience includes design and permit management, mass grading, erosion and sediment
21 control, drainage and other wet utilities, medium and high voltage electrical distribution
22 and transmission systems, pavement systems and various building types, restoration and
23 land stabilization along with landscaping. In between my two periods of employment with
24 Mortenson, I worked as the Director of Environmental & Engineering at Forest City
25 Stapleton; which involved extensive development engineering to support redevelopment
26 of the Stapleton Airport site in Denver, engagement with many federal, state, and local
27 authorities having jurisdiction (including the Colorado Public Utilities Commission), site
28 developers, builders, and other members of the community concerned with the program. I
29 joined Kleinfelder in 2019 as a member of our Central Division leadership team, and have
30 provided both support and leadership to our solar engineering team along with other market
31 segments in which Kleinfelder provides engineering and environmental services. A copy
32 of my resume is attached to my testimony as Attachment DB-1.

1 **3. On whose behalf are you offering testimony?**

2 I am testifying on behalf of Birch Solar 1, LLC (“Applicant” or “Birch Solar”), which is
3 seeking to develop the proposed Birch Solar facility (“Project”) in Allen and Auglaize
4 Counties, Ohio.

5
6 **4. What is the purpose of your testimony?**

7 The purpose of my testimony is to provide additional context, support, and clarification
8 regarding the following exhibits that are part of the Application for a Certificate of
9 Environmental Compatibility and Public Need (“Certificate”), filed by Birch Solar in Case
10 No. 20-1605-EL-BGN on February 12 and 17, 2021, as supplemented,¹ and further
11 supplemented by responses to data requests that were received from the Staff of the Ohio
12 Power Siting Board (“Board”) and filed in the docket (“Application”):

- 13
14 • Exhibit A – Site Plan
15 • Exhibit K – Geotechnical Investigation Report
16 • Exhibit L – Horizontal Directional Drilling Inadvertent Return Contingency Plan
17 • Exhibit O – Hydrology and Flood Inundation Study dated December 18, 2020
18 • Final Hydrology and Flood Inundation Study dated June 3, 2021, which was filed
19 as Attachment 1 to the Applicant’s Response to the Seventh Data Request from the
20 Staff.

21
22 In addition, my testimony provides additional context, support, and clarification regarding
23 the drain tile assessment and other constructability matters associated with the Engineering
24 Constructability Report (“ECR”).² My testimony, together with the other witnesses for
25 Birch Solar testifying in this case, supports approval by the Board of Birch Solar’s
26 application for a Certificate to construct the Project.

27
28 **5. Please describe the history of your involvement with the Birch Solar Project?**

29 I have been involved with the Birch Solar Project since mid-2020. Since working with the

¹ The Application was initially filed on February 12 and 17, 2021, and subsequently supplemented on: March 25, 2021; March 31, 2021; April 5, 2021; October 5, 2021; February 9, 2022; February 17, 2022; and May 4, 2022.

² The ECR was filed by the Applicant as a Supplemental Response to the Tenth Data Response.

1 Applicant to develop the initial scope of due diligence services (also referred to as
2 preliminary engineering), I have been involved in contracting for services, initial project-
3 level coordination of the services to be provided, subconsultants and subcontractors,
4 ongoing oversight and collaboration with Kleinfelder's technical delivery team and the
5 Applicant's engineering and development team. This involvement extended to supporting
6 the Applicant at a public information meeting.

- 7
- 8 **6. Have you reviewed the Certificate conditions recommended by the Board's Staff on**
9 **pages 50 through 58 of their Report of Investigation issued on October 20, 2021**
10 **("Staff Report")?**

11 Yes I have.

- 12
- 13 **7. Are you aware that the Applicant has accepted the Certificate conditions**
14 **recommended by the Board's Staff in the Staff Report and has committed to comply**
15 **with those conditions as part of its Certificate issued in this case?**

16 Yes. That is my understanding.

- 17
- 18 **8. Please describe the Site Plan for the Project that is found in Exhibit A of the**
19 **Application.**

20 The site plan found in Exhibit A depicts the existing site conditions, land and flood features,
21 initial array layout, anticipated grading, an initial erosion and sediment control concept,
22 fencing, site access, and typical details representative of features involved with plant
23 construction (e.g., roadway cross sections, fence details, potential erosion control details,
24 etc.). The level of design is performed to provide an initial layout, main project elements,
25 and engineering of this portion of the Project to establish the basic scope of the Project in
26 order to inform the detailed engineering and costing that occurs in the Engineering,
27 Procurement and Construction ("EPC") phase of the Project.

- 28
- 29 **9. Please describe the requirements set forth in the rules of the Board and the**
30 **documentation provided by Birch Solar in response to the requirements pertaining**
31 **to the geotechnical studies conducted for this Project.**

32 In accordance with Ohio Administrative Code ("O.A.C.") Rule 4906-04-08(A)(5), Birch

1 Solar is required to submit the following information as part of the Application:

2 • A description of the suitability of the site geology and plans to remedy any
3 inadequacies.

4 • A description of the suitability of soil for grading, compaction, and drainage, and
5 plans to remedy any inadequacies and restore the soils during post-construction
6 reclamation.

7 • A description of plans for the test borings, including closure plans for such borings
8 and a timeline for providing the test boring logs and the following information to
9 the Board: (i) subsurface soil properties; (ii) static water level; (iii) rock quality
10 description; (iv) percent recovery; and (v) depth and description of bedrock contact.

11
12 The Kleinfelder report contained in Exhibit K of the Application addresses each of these
13 requirements.

14
15 **10. Please summarize the findings of Geotechnical Investigation Report found in Exhibit**
16 **K of the Application.**

17 The Geotechnical Report found in Exhibit K provides a characterization of the subsurface
18 conditions at the site along with geotechnical recommendations for design and construction
19 of the Project. This characterization and related recommendations are focused on how the
20 soil properties relate to the planned use of the site as a solar electric power plant. The
21 report is organized to present information developed from the field exploration that was
22 conducted, material properties derived from soil sampling during the exploration, the
23 geologic setting in which this exploration was performed, and specific values for the
24 pertinent engineering properties and recommendations to inform final engineering, design,
25 and construction of the Project.

26
27 The geotechnical investigation included a subsurface exploration consisting of soil borings,
28 test pits and in-situ (in place) field tests, laboratory testing from field samples that were
29 collected, engineering analysis related to those activities and pile load testing to directly
30 measure soil properties that inform foundation engineering. The test results and analysis
31 also inform other aspects of the Project including preparation of the stie, earthwork, access

1 roadway, equipment pads, electrical cabling and systems design, and other Project
2 elements. The report concluded that the site appears to be suitable for the intended
3 development provided the recommendations outlined in the report are properly
4 incorporated in the design and construction of the Project.

5
6 **11. What is the purpose of Horizontal Directional Drilling?**

7 The purpose of Horizontal Directional Drilling (“HDD”) is to provide a subsurface
8 pathway for infrastructure to be installed without disrupting or damaging overlying
9 material or surface land uses. Examples to illustrate the purpose of HDD might include
10 drilling to install electrical cables under a railroad, active roadway, or waterway.

11
12 **12. Please explain the Horizontal Direction Drilling Inadvertent Return Contingency
13 Plan Contained in Exhibit L of the Application.**

14 The Horizontal Directional Drilling Inadvertent Return Contingency Plan (“HDD Plan”)
15 establishes procedures for the prevention, containment, and clean-up of drilling fluid (a
16 slurry) that emerges on the ground surface or other undesirable location due to the loss of
17 fluid used to form the bore hole. Prevention measures are addressed through the explicit
18 design of the HDD profile, design documents, and specific procedures involved with the
19 drilling operation (e.g., monitoring fluid pressure) for each location where HDD is
20 employed. Containment measures are also incorporated into the design, which includes
21 containment measures near the bore hole entry and exit points which exhibit the highest
22 potential for inadvertent returns. Clean-up of the drilling fluid is normally accomplished
23 with excavation equipment or a vacuum truck where fluid discharge occurs. The plan also
24 outlines responsibilities for monitoring and detection of inadvertent returns as well as
25 inspection and compliance monitoring of the field operation after the design is approved.

26
27 **13. Please summarize the findings in the Hydrology and Flood Inundation Study found
28 in Exhibit O of the Application, as updated by the Final Hydrology and Flood
29 Inundation Study dated June 3, 2021.**

30 The purpose of the Hydrology and Flood Inundation Study is to model, analyze, and
31 provide information about the hydrologic and hydraulic conditions at the project location.
32 The modeling involves using computer software, existing site data such as topography, soil

1 types, and ground cover information coupled with existing published flood and rainfall
2 data to assess flood conditions at the site under various intensities. The study provides
3 drainage information used in the site development and final engineering processes to assess
4 the potential impact of water coming onto, transiting, and exiting the site. This, in turn,
5 allows engineering decisions to be made within each established watershed regarding site
6 design considerations such as site grading, drainage water conveyance, protection of
7 planned improvements, and mitigation of flows if necessary, along with planning for
8 operation and maintenance of the developed site and associated drainage infrastructure. As
9 part of the final design process that occurs during the EPC phases of the Project, a post-
10 development flood study is performed to model expected flood and stormwater behavior
11 in conjunction with and upon completion of the final design documents that are approved
12 and permitted for construction. This study seeks to confirm that post-development
13 conditions correspond with pre-development conditions and serve to inform county and
14 local stormwater and flood management programs.

15
16 **14. Please explain your involvement with the review and investigation of the oil and gas**
17 **wells in the Project Area and the ECR.**

18 Kleinfelder was involved with the review and investigation of oil and gas wells in the
19 Project Area and ECR in several different ways. We: received initial location information
20 that was extracted from the Ohio Department of Natural Resources (“ODNR”) database of
21 well information; validated that information by separate inspection of the data contained
22 in ODNR’s well database and GIS system; commissioned a targeted electromagnetic
23 survey in the vicinity of the documented well-locations in an effort to confirm accuracy of
24 the well data; worked in collaboration with the development team to develop a reasonable
25 mitigation approach around identified wells; participated in consideration of a different
26 investigation methodology that provides complete site coverage rather than relying on
27 existing information; and commissioned a new survey using the recommended aerial
28 magnetometer survey technology and methodology. I worked with our delivery team to
29 integrate the outcomes from these surveys and mitigation decisions into the preliminary
30 design documents for the Project.

31
32 **15. What other efforts were made to identify oil and gas wells in the Project Area?**

1 In addition to the investigation efforts already described, an aerial magnetic survey was
2 conducted by UAV Exploration (“UAVEX”), as detailed in the ECR. UAVEX was
3 suggested by ODNR as it had previously engaged UAVEX to perform magnetic surveys.
4 The methodology used in the UAV Exploration Birch Solar Magnetic Well Survey-Final
5 Report has been validated by ODNR resulting in a high degree of confidence in the results
6 and conclusions.

7

8 **16. Based upon the commitments Birch Solar has made through the Geotechnical Report,**
9 **HDD Plan, Hydrology Study, Drain Tile Assessment, and Engineering**
10 **Constructability Report together with the conditions in the Staff Report, is it possible**
11 **to determine the nature of the probable environmental impact of the facility?**

12 Yes.

13

14 **17. Based upon the commitments Birch Solar has made through the Geotechnical Report,**
15 **HDD Plan, Hydrology Study, Drain Tile Assessment, and Engineering**
16 **Constructability Report together with the conditions in the Staff Report, does the**
17 **facility represent the minimum adverse environmental impact on those resources?**

18 Yes.

19

20 **18. Are your opinions and conclusions in your testimony made with a reasonable degree**
21 **of professional certainty?**

22 Yes.

23

24 **19. Does this conclude your testimony?**

25 Yes. However, I reserve the right to update my testimony to respond to any further
26 testimony, reports, and/or evidence submitted in this case.

CERTIFICATE OF SERVICE

The Ohio Power Siting Board's e-filing system will electronically serve notice of the filing of this document on the parties referenced in the service list of the docket card who have electronically subscribed to these cases. In addition, the undersigned certifies that a copy of the foregoing document is also being served upon the persons below this 4th day of May, 2022.

/s/ Christine M.T. Pirik

Christine M.T. Pirik (0029759)

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Attachment DB-1
Derek Brown
Resume



DEREK BROWN, PE

SUBJECT MATTER EXPERT/PROGRAM MANAGER

With over 40 years of experience as an engineering and construction professional, Derek has an extensive engineering and construction management background for many infrastructure development programs, including heavy civil works projects. His experience spans planning and preliminary engineering and permitting through design and construction implementation. He has led planning and design programs ranging over \$700-million and executed construction programs totaling nearly \$1.8-billion. He is experienced in conducting and managing projects in various roles, including indefinite-delivery of indefinite quantity engineering programs involving up to \$100-million in concurrent infrastructure design and construction management projects. His clients and peers recognize Derek for his collaborative approach to project leadership, excellent communication and engineering abilities, and broad experience working inside complex engineering and construction programs. His experience spans a variety of roles, including director-level and regional leadership, operations, engineering management, construction management, and general contracting, which makes him an ideal subject matter expert for (insert subject here).

Years of Experience

40 years

Education

Masters, Civil Engineering,
University of Washington,
Seattle, 1988

Bachelors, Engineering
Management, United States
Air Force Academy, Colorado
Springs, 1986

Registrations

Professional Engineer (PE),
No. 33757, CO

Certifications

Construction Quality
Management, USACE
30-Hr Construction Safety and
Health, OSHA

Awards

Materiel Command Award for
Quality, US Air Force

AREAS OF EXPERTISE

- Program Management
- Engineering, Planning/Design
- Preconstruction/Budgeting
- Design Phase Management
- Construction Management
- Metro / Special Tax Districts
- Energy and Infrastructure
- Collaborative Delivery
- Infrastructure Master Planning
- BRAC / Redevelopment

PROFESSIONAL EXPERIENCE

Kleinfelder

2019 – Present

Vice President, Major Accounts Manager

Mr. Brown leads the infrastructure engineering team for Kleinfelder's Central Division, including water, transportation, oil & gas, and facilities markets. Focus includes service offerings in each market area, including environmental, geotechnical engineering, structures/water engineering, construction management, and project implementation support services.

M.A. Mortenson Company
2011 – 2019
Project Executive / Project Director

Mr. Brown led wind energy and civil infrastructure teams, including project planning, engineering management, design and preconstruction phase services, and construction operations management for designated projects.

- Key executive management team member for the 85-person civil infrastructure division. Secured \$160 million in projects, 1100-acres of development, 50,000 SF of office and industrial, programming, and planning for 500,000 SF mixed-use commercial development.
- Provided development support services for over 9000-acres of greenfield and brownfield mixed-use development, including budgeting, feasibility analyses, infrastructure master planning, development agreements, metro district planning, permit management, program phasing, and scheduling. Successfully launched three major developments valued at over \$2 billion.
- Mr. Brown led procurement and completion of 15 wind energy projects valued at over \$600 million involving over 800 turbines, high voltage transmission/substations, and support facilities. All projects are delivered on an EPC basis, including development support, budgeting, design, permitting, and construction. Averaged 10% margin and consistently earned outstanding customer performance/satisfaction ratings.
- Awarded Colorado Contractors Association, Water Project of the Year.
- Projects – Chatfield, Sterling Ranch Master Planning, Stapleton Redevelopment

URS Corporation
2010 – 2011
Vice President

Led federal business line and SW Region construction and design-build programs. Provided project-specific support to Cannon AFB and Davis-Monthan AFB expansion programs, including 250,000 SF office facilities, 75,000 SF equipment maintenance facilities, integrated solar power parking facilities, and program management support for classified USAF programs and western region USFWS MATOC projects.

- Developed market/procurement strategy and led proposal teams while supporting national large-project pursuits integrated capabilities across multiple offices. Secured \$30 million in new projects.
- Provided design management for design-build projects, design coordination/reviews and compliance monitoring for building codes and design standards, and value engineering/analysis. Produced project-level savings of \$500,000 and reduced design time by nearly 2-months.
- Delivered development support and design management for over 1500-acres of mixed-use projects.

Forest City Enterprises
2006 – 2010
Director of Engineering

Mr. Brown led planning, entitlement, environmental, and engineering teams for 4700-acre Stapleton and Fitzsimons campus redevelopments. Projects involved brownfield development, land acquisition, due diligence processes, facility siting studies, and environmental permitting with local, state, and federal agencies.

- Completed \$350 million in mixed-use projects, including a 640-acre general development plan, 1200-acre infrastructure master plan, and 16 residential and commercial subdivision infrastructure.
- Mr. Brown led planning and design of all water pipeline and storage facilities for North Stapleton, working in conjunction with Denver Water and City & County of Denver to ensure all facilities and infrastructure were delivered to coordinate with development, utility, and district schedule technical requirements.
- Mr. Brown led integration of environmental clean-up efforts with building/infrastructure construction standards in four major development areas to secure a 10-year development program.
- Completed three federal interstate projects, oil pipeline relocations, at-grade and grade-separated rail crossings and dry utility system upgrades, and flood plain management/mapping changes to support critical

commercial development areas.

- Mr. Brown led park/open-space planning to integrate drainage facilities with wetland areas and recreation amenities and provide bicycle and trail connectivity throughout the 4700-acre development.
- Developed interim bus transfer facility to coordinate with the demolition of the antiquated parking garage to secure uninterrupted transit service to the community and enable the construction of new light-rail stop and transit-oriented development.
- Recognized with a Board of Directors Commendations for the Stapleton Redevelopment.

M.A. Mortenson Company

1995 – 2006

Senior Project Manager / Business Development

Mr. Brown was the lead project manager for \$150 million in airfield facilities, office and maintenance facilities, dormitory and dining facility projects, and infrastructure projects throughout the United States. Developed marketing and business development strategy for federal business.

- Mr. Brown led successful completion of 16 projects valued at \$278 million to provide infrastructure for more than 700 acres of residential subdivisions, commercial development, and community parks. Directed a staff of over 30 construction managers, engineers, surveyors, and support at Stapleton Redevelopment.
- Procured \$500 million in multiple-award contracts providing nationwide facilities for the Navy.
- Developed procurement strategy, design-phase management, and construction phase execution of nearly \$100 million in best-value procurements for airfield and industrial facilities for the Navy.
- Received Corps of Engineers, Contractor of the Year Award, and Heartland Award for Partnering.

SELECTED PROJECT EXPERIENCE

Martin Luther King Jr. Blvd. Extension, Forest City Enterprises, Denver, CO, From 2019 To Present

As a project executive for Mortenson, Mr. Brown provided supervisory engineering, construction management, and agency coordination services to extend access to a mixed-use development area spanning the municipal boundary between Denver and Aurora, CO. This was a publicly funded, new construction project with a value of \$15,000,000 completed with architect AECOM.

Baseline Development, McWhinney, Westminster, CO, From 2019 To Present

As a project executive for Mortenson, Mr. Brown managed an 1100-acre greenfield development project. The project scope included preconstruction services and cost estimating with expansion to complete construction management upon budget approval. This was a privately funded, new construction project valued at \$300,000,000 completed with architect Matrix Design Group.

Sterling Ranch Subdivision Improvements - Filing 1, Sterling Ranch CAB, Littleton, CO, From 2016 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group and a project that included a 320-acre subdivision, off-site improvements, sewage lift station, WWTP improvements, 1.2 Mgal water storage tank, and infrastructure planning for water storage and future filings. This was a privately funded, new construction project valued at \$90,000,000 completed with architects Redland Engineering and Matrix Design Group.

Alexander Wind Farm, NJR Clean Energy, Alexander, KS, From 2015 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group to develop a 20 MW wind farm and substation. This was a privately funded, new construction project valued at \$22,000,000 completed with architect Westwood Professional Services.

Wellsburg Wind Farm, Mid-American Energy, Wellsburg, IA, From 2014 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group to develop a 120 MW wind farm and substation. This was a privately funded, new construction project valued at \$42,000,000 completed with architect Westwood Professional Services.

Macksburg Wind Farm, Mid-American Energy, Winterset, IA, From 2014 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group to develop a 140 MW wind farm and substation. This was a privately funded, new construction project valued at \$43,000,000 completed with architect Westwood Professional Services.

Highland Wind Farm, Mid-American Energy, Primghar, IA, From 2014 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group to develop a 500 MW wind farm and substation. This was a privately funded, new construction project valued at \$140,000,000 completed with architect Westwood Professional Services.

Two Dot Wind Farm, NJR Clean Energy, Two Dot, MT, From 2014 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group to develop a 10 MW wind farm. This was a privately funded, new construction project valued at \$12,000,000 completed with architect Westwood Professional Services.

Carroll Area Wind Farm, NJR Clean Energy, Carroll, IA, From 2014 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group to develop a 22 MW wind farm and substation. This was a privately funded, new construction project valued at \$24,000,000 completed with architect Westwood Professional Services.

2014 Panhandle Wind Project, Pattern Energy Group, Panhandle, TX, From 2014 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group to develop a 110 MW wind farm, substation, and transmission line. This was a privately funded, new construction project valued at \$68,000,000 completed with architect Westwood Professional Services.

2013 Panhandle Wind Project, Pattern Energy Group, Panhandle, TX, From 2013 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group to develop a 218 MW wind farm, substation, and transmission line. This was a privately funded, new construction project valued at \$41,000,000 completed with architect Westwood Professional Services.

Musselshell Wind Project, Goldwind USA, Shawmut, MT, From 2012 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group to develop a 20 MW wind farm. This was a privately funded, new construction project valued at \$14,000,000 completed with architect Westwood Professional Services.

Stapleton Filing 52/54, Forest City Enterprises, Denver, CO, From 2018 To Present

As a project executive for Mortenson, Mr. Brown managed a 200-acre subdivision project. The project scope included parks and open space, a sewage lift station, and public school facilities/coordination. This was a publicly funded, new construction project valued at \$40,000,000 completed with architect Matrix Design Group.

Spearville 3 Wind Project, enXco Development, Spearville, KS, From 2012 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group to develop a 100 MW wind farm, substation, and transmission line. This was a privately funded, new construction project valued at \$39,000,000 completed with architect Westwood Professional Services.

Mojave Regional O&M Facility, enXco Development, Rosamond, CA, From 2011 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group to develop a 10,500-square-foot operations and maintenance facility. This was a privately funded, new construction project valued at \$3,500,000 completed with architect Western Mountain Power.

Pacific Wind Energy Project, enXco Development, Rosamond, CA, From 2011 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group to develop a 140 MW Wind Farm and Substation. This was a privately funded, new construction project valued at \$55,000,000 completed with architect Westwood Professional Services.

Lakefield Wind Project, enXco Development, Lakefield, MN, From 2011 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group to develop a 205 MW Wind Farm and Substation. This was a privately funded, new construction project valued at \$55,000,000 completed with architect Westwood Professional Services.

DOD Construction Programs, United States Government, Denver, CO, From 2011 To Present

As the Vice President of URS, Mr. Brown led the construction management group on federal projects throughout Mountain Region, emphasizing Air Force projects. This was a federally funded, new construction project with a value of over \$50,000,000 completed with architect URS Corporation.

Stapleton Redevelopment Projects, Forest City Enterprises, Denver, CO, From 2010 To Present

As a project director for Forest City, Mr. Brown supervised all land acquisitions, environmental due diligence, development, and government agreements for the program. The development projects included a 1200-acre infrastructure master plan, a 640-acre general development plan, 300-acre remediation, parks & open space, interstate highway access/interchange, 15-subdivisions, and engineering and implementation support mixed-use and multi-family residential projects. Mr. Brown led more than 25 members of staff of engineers, consultants, attorneys, and real estate professionals to develop budgets and plans and initiate all projects. Forest City provided construction phase support for all projects during the construction phase. This was a privately funded, new construction project valued at over \$350,000,000 completed with architect URS Corporation.

National Western Stockshow, National Western Center, Denver, CO, From 2018 To Present

As a pursuit lead for Mortenson, Mr. Brown secured a multi-year single-award task order contract for infrastructure management to coordinate separately procured vertical construction projects. This was a publicly funded project valued at \$250,000,000 completed with multiple firms.

Chatfield Storage Reallocation Project, Chatfield Reservoir Mitigation Co., Littleton, CO, From 2018 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group on a 20,000 acre-foot water storage expansion project. The project included relocating infrastructure, marina, roadway/utilities, and park improvements. This was a privately funded, new construction project valued at \$45,000,000 completed with architect HDR.

Clear Creek Crossing, Evergreen Development Company, Wheat Ridge, CO, From 2017 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group on a project on a 120-acre subdivision. The project included infrastructure improvements, highway interchange/ramps, large-diameter conduit coordination, and site development. This was a privately funded, new construction project valued at \$30,000,000 completed with architect Martin/Martin Engineers.

Adonea Development, Oakwood Communities, Aurora, CO, From 2007 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group on a project on a 160-acre residential development. Mr. Brown led the cost modeling efforts to support project acquisition, infrastructure planning, and implementation strategy. This was a privately funded, new construction project valued at \$40,000,000 completed with architect JR Engineering.

Reunion Development, Oakwood Communities, Adams County, CO, From 2017 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group on a project on a 2500-acre mixed-use development. Mr. Brown led the cost modeling efforts to support project acquisition, infrastructure planning, and implementation strategy. This was a privately funded, new construction project valued at \$400,000,000 completed with architect JR Engineering.

Horizon Uptown, LendLease Communities, Aurora, CO, From 2017 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group on a project on a 500-acre mixed-use development that included land planning, infrastructure support/planning, and strategy for special district utilization. This was a privately funded, new construction project valued at \$140,000,000 completed with architect Matrix Design Group.

Aurora Crossing, Evergreen Development Co., Aurora, CO, From 2017 To Present

As a construction executive for Mortenson, Mr. Brown led the construction management group on a project on a 5-acre mixed-use development that included land planning, infrastructure support/planning, and strategy for special district utilization. This was a privately funded, new construction project valued at \$5,000,000 completed with architect Galloway Engineering.

**This foregoing document was electronically filed with the Public Utilities
Commission of Ohio Docketing Information System on**

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in

Case No(s). 20-1605-EL-BGN

Summary: Testimony - Direct Testimony of Derek Brown electronically filed by
Christine M.T. Pirik on behalf of Birch Solar 1, LLC