

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of The Application of Moraine Wind LLC for Certification as an Eligible Ohio Renewable Energy Resource Generating Facility.)	Case No. 21-0516-EL-REN
In the Matter of The Application of Rugby Wind LLC for Certification as an Eligible Ohio Renewable Energy Resource Generating Facility.)	Case No. 21-0517-EL-REN
In the Matter of The Application of Elm Creek II for Certification as an Eligible Ohio Renewable Energy Resource Generating Facility.)	Case No. 21-0531-EL-REN
In the Matter of The Application of Buffalo Ridge II for Certification as an Eligible Ohio Renewable Energy Resource Generating Facility.)	Case No. 21-0532-EL-REN
In the Matter of The Application of Barton Windpower 1 for Certification as an Eligible Ohio Renewable Energy Resource Generating Facility.)	Case No. 21-0544-EL-REN

INITIAL COMMENTS OF CARBON SOLUTIONS GROUP, LLC

The Commission has invited comments to the Staff Review and Recommendation (or “Staff Report”) filed in each of the above-captioned cases in August 2021. These cases have not been consolidated. Nonetheless, the following comments of Carbon Solutions Group, LLC (CSG) are generally applicable to each case.

I. INTRODUCTION

These cases involve applications by out-of-state wind energy generators for certification as “qualifying renewable energy resources” under R.C. 4928.64. To become certified, each applicant must show (among other things) that the output of its facility is “deliverable into this state,” meaning “physically deliverable” to Ohio.¹ Each Staff Report states that the subject facility satisfies the deliverability requirement. Each Staff Report is baseless and unsupported.

Staff claims it reviewed the applicants’ submissions “consistent with the approach first established in Case No. 09-0555-EL-REN,”² the *Koda* case. The *Koda* facility was connected to MISO transmission, which also served part of Ohio at the time. The applicants are also connected to MISO, but MISO no longer manages transmission in Ohio—PJM has been the sole RTO in Ohio since 2012.³ At a minimum, an approach “consistent with” *Koda* would have examined power flows across both grids, as both grids are necessary to “physically deliver” power from the Upper Midwest to Ohio. Staff only looked at PJM power flow data *within* Ohio, without considering how the generation behind these power flows would or could get to Ohio in the first place. Staff’s approach is not at all consistent with *Koda*.

The Staff Reports simply *assume* the very matter Staff was supposed to examine. The issue is whether renewable generation connected to MISO in the Upper Midwest is “physically deliverable” into Ohio—meaning there is a viable transmission path from Point A to Point B. Staff *assumed* a transmission pathway to Ohio and asked PJM to perform “studies” accepting

¹ R.C. 4928.64(B)(3)(b); O.A.C. 4901:1-40-01(F).

² Staff Reports at 2. Given the similarity of the Staff Reports, all citations apply to all reports.

³ See *MISO Transmission Owners v. FERC*, 860 F.3d 837, 842 (6th Cir. 2017)(explaining withdrawal of American Transmission Systems, Inc. (a FirstEnergy affiliate) and Duke Energy from MISO in 2011 and 2012, respectively).

this assumption as fact. PJM modeled fictitious, hypothetical power flows, not actual power flows. An analysis of hypothetical power flows *within* Ohio is indifferent to where the power originates. The approach taken here could just as easily be used to conclude that power from California, Texas, or Maine is “deliverable into this state,” which makes no sense on its face.

The Commission cannot rely on Staff’s recommendations because the recommendations are based on unsupportable conclusions. No applicant in any of these cases is entitled to a certificate.

II. COMMENTS

The Staff Report analyses and recommendations are purportedly based on the *Koda* approach. The premise underlying *Koda* is that deliverability cannot be directly observed, but it may be inferred by power flow studies. (CSG does not necessarily agree with this premise, but the Commission may accept it for now.)⁴ If we apply this premise here, the power flow studies must account for transmission system impacts from the generation sources in MISO to the PJM grid within Ohio. The current borders of PJM and MISO are shown below:

⁴ At a hearing, CSG would present evidence demonstrating the shortcomings of *Koda* and alternative approaches to more accurately determine physical deliverability. For present purposes, these comments will focus on Staff’s flawed attempt to apply *Koda*.

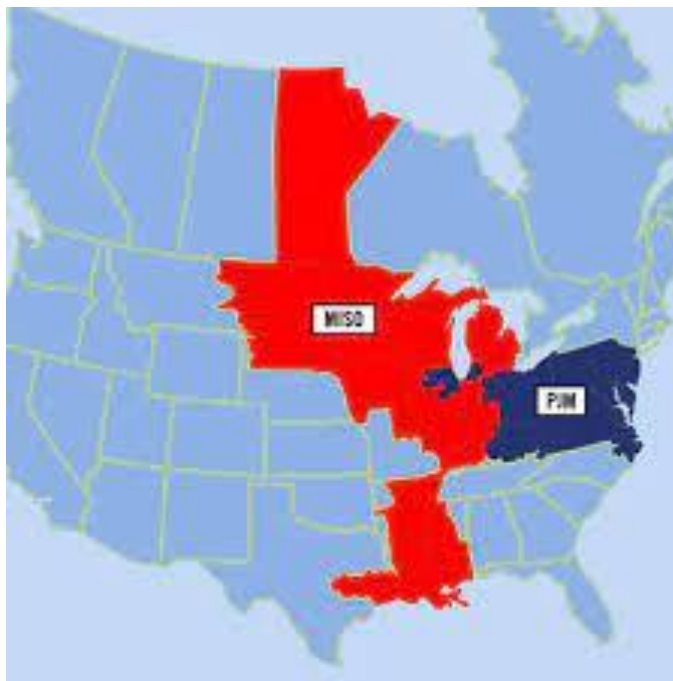


Figure 1: MISO and PJM Borders

Absent an examination of the *entire* transmission path, as was done in *Koda*, there is no basis for Staff’s conclusions that generation from the applicants’ facilities is “deliverable into the state.”

A. CERTIFICATION REQUIREMENTS

Ohio law requires electric utilities and retail suppliers to source certain percentages of renewable energy from “qualifying renewable energy resources.”⁵ Certification allows the owner of the resource to earn and sell RECs that may be purchased to meet these requirements. To obtain certification, the facility must be located “in this state” or energy from the facility must be “deliverable into this state.”⁶ “Deliverable into this state” is not statutorily defined; the Commission defines this to mean “within a state contiguous to Ohio” or “from other locations, pending a demonstration that the electricity is physically deliverable to the state.”⁷

⁵ See R.C. 4928.64(B)(1).

⁶ See R.C. 4928.64(B)(3).

⁷ O.A.C. 4901:1-40-01(F).

The applicants' facilities are in North and South Dakota, Minnesota and Iowa. None of these states are "contiguous to" Ohio. Each applicant must therefore demonstrate that the output of its facility is "physically deliverable" to Ohio, which was the question examined in *Koda*.

In *Koda*, Staff recognized that "deliverability" is not straightforward because the properties of electricity and the transmission system make it impossible to directly observe the source of electricity on the grid at any given time. The underlying assumption of *Koda* is that the source of electricity may be inferred from power flow studies, or "DFAX studies," performed by the transmission operator. Staff reasoned that if a power flow study showed the addition of the renewable resource would have a "significant impact" on the transmission system, "Staff would consider this impact as evidence of deliverability."⁸ Staff found that MISO's study of the *Koda* facility revealed impacts too negligible for the generation to be considered "deliverable into this state."⁹

No briefs were filed in *Koda*. The final order summarizes Staff's comments and adopts Staff's recommendation.¹⁰

Since *Koda*, testimony by a former Chair of the Commission reveals that as of April 2019, of nearly 10,000 facilities certified as qualified renewable resources, only two have been granted to facilities in states not contiguous to Ohio:¹¹

⁸ Case No. 09-0555-EL-REN, Staff Review and Recommendation (Feb. 28, 2011) ("*Koda* Staff Report") at 5.

⁹ *Id.* at 7-8.

¹⁰ Case No. 09-0555-EL-REN, Finding and Order (Mar. 23, 2011).

¹¹ This testimony is available at:
<https://puco.ohio.gov/static/emplibrary/files/media/testimony/PUCO+Chairman+Sam+Randazzo+Testimony+6.5.19.pdf>

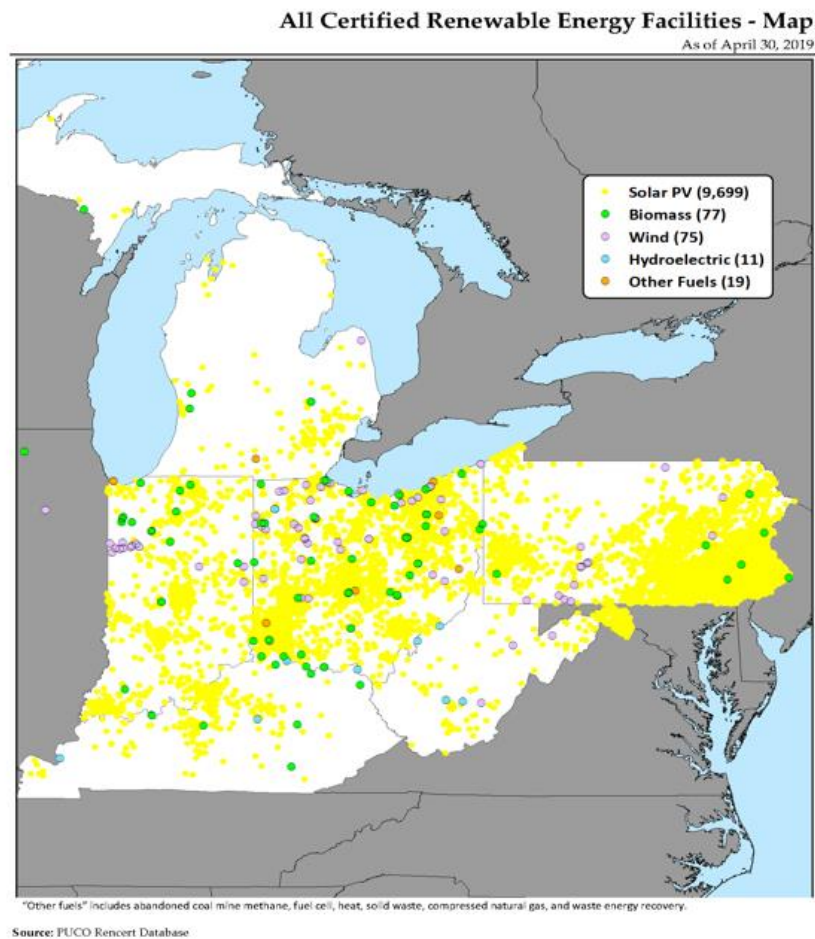


Figure 2: Certified Renewable Energy Facilities

As this map visually illustrates, the applicants in these proceedings are outliers—literally. They are not entitled to certification.¹²

¹² During 2021, the Commission granted certificates in unopposed applications filed in the following cases: 20-1091 (Elk Wind Energy), 20-1092 (Hawkeye Wind Energy), 20-1150 (Autumn Hills), 20-1637 (Superior Wind Project), 20-1638 (Lakota Wind Project), 20-1692 (Rail Splitter Wind Farm), 20-1761 (Rippey Wind Farm), 20-1821 (Pioneer Trail Wind Farm), and 21-0085 (Clear Creek Wind). Staff's recommendations in those dockets were unsupported for the same reasons they are unsupported here. The Commission should therefore revoke these erroneously-granted certificates under O.A.C. 4901:1-40-04(D)(7).

B. STAFF’S REVIEW AND RECOMMENDATION

Each Staff Report is essentially a cut-and-paste of the others. This is not a criticism of Staff, but a recognition that each application involves the same basic facts and was subjected to the same analysis.

1. The Staff Reports

Page 2 of each report describes Staff’s approach. Because each applicant is a “grid-connected facility” in a state not contiguous to Ohio, Staff determined that each applicant “would need to provide sufficient documentation to demonstrate physical deliverability to Ohio consistent with the approach first established in Case No. 09-0555-EL-REN.”¹³ Staff concluded that physical deliverability is satisfied where “the absolute value of (a facility’s) impact on a transmission line in Ohio must be greater than 5 percent and greater than 1 MW, as determined by an adequate power flow study.”¹⁴

According to Staff, each applicant furnished “a DFAX power flow study which was performed by PJM” which “evaluated the impacts of power flows from the Facilities injection of energy on approximately 3,000 electric system transmission facilities in Ohio and the surrounding areas.”¹⁵ Staff reviewed these impacts, performed some calculations purporting to show that each facility would impact transmission in Ohio above the *Koda* thresholds, and concluded that the output of each facility “is physically deliverable to the state of Ohio.”¹⁶

¹³ Staff Reports at 2.

¹⁴ *Id.* See also *Koda* Staff Report at 5.

¹⁵ Staff Reports at 2.

¹⁶ *Id.*

The PJM studies Staff reviewed have not been filed and are not part of any record. It is CSG’s understanding that the applicants did not request these studies from PJM and turn them over to Staff; Staff requested the studies from PJM directly. CSG is confident that at a hearing, PJM would testify that it performed these “studies” as a courtesy to Staff, and not because they demonstrate anything of relevance to PJM—including whether the power flows it modelled are deliverable into PJM. The Staff Reports represent Staff’s conclusions, not PJM’s.

Questions about the validity of the data Staff relied on can be left for another day. For now, the more important point is that none of the data produced by PJM, nor Staff’s review of this data, supports Staff’s conclusions about deliverability.

2. Staff’s approach is not “consistent with” *Koda*.

Contrary to being “consistent with” *Koda*, Staff’s approach is contrary to the very idea that “deliverable into this state” means actual, physically delivery of electricity from a non-contiguous state through a contiguous state and ultimately into Ohio.

In *Koda*, Staff explained: “[I]n order for a generating facility to meet the criteria of deliverable into the state from outside of Ohio or a contiguous state, the facility must be tied to transmission and the facility must be modeled by the RTO in the power flow study.”¹⁷ Two RTOs operated transmission in Ohio at the time, so Staff commissioned power flow studies from each but found the MISO study “of particular relevance.”¹⁸ This stands to reason since MISO operated the grid serving Minnesota and Ohio.

Staff’s goal was to ascertain whether the generation was physically deliverable—meaning

¹⁷ *Koda* Staff Report at 5.

¹⁸ *Id.* at 6. Moreover, Staff’s comments suggest that PJM power flow studies were commissioned as part of Staff’s effort to develop general deliverability criteria and *not* to determine deliverability for the *Koda* facility specifically.

the new renewable generation would displace non-renewable generation consumed in Ohio. The existence of this new renewable resource within the same RTO region encompassing part of Ohio established a theoretical basis for deliverability, but Staff recognized the practical limitations of a transmission system in which *possible* electrical flows do not necessarily represent *probable* flows. The MISO study performed for the *Koda* facility—a facility located in the same part of the country as the applicants—confirmed this phenomenon.

The Staff Reports here reflect an entirely hypothetical and irrelevant exercise. Staff’s discussion begins with a failure to acknowledge that the applicants’ “grid-connected” facilities are connected to a different grid.¹⁹ The facilities are connected to MISO but nothing is known about the transmission path—if there is one—from these facilities to an interconnection with PJM. Unlike in *Koda*, the transmission operator who will manage flows from the applicants’ facilities (*i.e.*, MISO) has contributed no information. It is impossible to draw conclusions about whether power is deliverable *within* Ohio if physical or economic constraints inhibit flows *to* Ohio in the first place.

As for PJM, the relevance of its power flow studies is far from evident. Staff does not claim that PJM modelled power flows within MISO. Staff does not claim PJM examined flows from one or more MISO-PJM interconnection points to transmission lines in Ohio. PJM only “evaluated the impacts of power flows” in Ohio, meaning PJM only ran scenarios showing the hypothetical effects of power hypothetically delivered. Staff does not claim that PJM examined how this power might get to Ohio in the first place—hypothetically or otherwise.

Even if the output of any of applicants’ facilities *could* theoretically find its way to PJM and Ohio, the underlying principle of *Koda* is that theory is not a substitute for evidence. Here,

¹⁹ Staff Reports at 2.

Staff's theory does not even match the relevant hypothesis. The question is whether the applicants' facilities are physically deliverable to Ohio, not what would happen within Ohio if deliverability is assumed.

Staff seems to have focused on the similarities between the applicants' facilities and the *Koda* facilities but has overlooked important differences. Rather than modify or supplement *Koda* to match the facts, Staff's analysis blurs the facts to match *Koda*. The resulting conclusions are unreliable, unsupported, and irrelevant.

III. CONCLUSION

CSG did not intervene in these cases to challenge the *Koda* test or certification process. CSG intervened to ensure the Commission examines the deliverability issue with a critical eye. Facilities that have operated in MISO for a decade or more (and earning RECs in MISO) have recently shown up in Ohio in droves requesting certification. The approach taken to make a delivery determination in 2021 cannot be the same approach taken in 2011 because power flows have changed dramatically—we are now dealing with power flows across two RTOs, not just one, but this makes renewable energy from the Upper Midwest *more* readily deliverable? Something does not add up.

There is simply no evidence that one single electron generated by any of these MISO-based facilities will affect PJM transmission in Ohio in any way, or that the output of these facilities is otherwise “deliverable into this state.” The Commission should reject Staff's recommendations and deny the certificates.

Dated: November 18, 2021

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Initial Comments of Carbon Solutions Group, LLC was served by electronic mail this 18th day of November, 2021 to the following:

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REN, 21-0544-EL-REN**

Summary: Comments Initial Comments of Carbon Solutions Group, LLC
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