

## **New Information Pertaining to Need for Invenergy Proposed Dual-Fuel Plant – Since September 14, 2018**

This is my fifth set of written testimony filed on behalf of Conservation Law Foundation (CLF) regarding any purported need for either unit 1 (485 MW) or unit 2 (485 MW) of Invenergy's proposed Burrillville power plant. These are the four sets of testimony I previously filed:

- June 14, 2016 PUC Testimony in PUC Docket No. 4609 (2016 PUC Testimony);
- July 3, 2017 Direct Testimony in the EFSB (2017 Direct Testimony);
- February 23, 2018 Supplemental Testimony in the EFSB (2018 Supplemental Testimony); and
- September 14, 2018 Memorandum to the EFSB (September 2018 Memorandum).

In this Memorandum, I incorporate by reference and adopt the full contents of my prior four submissions on behalf of CLF pertaining to Invenergy. I also use defined terms in this Memorandum in the same ways I used the same terms in my prior submissions.

My September 2018 Memorandum was a relatively short document, the first portion of which summarized my three prior filings; this current Memorandum should be read in the context of the September 2018 Memorandum. I therefore attach it at Tab A.

In all four of my prior submissions, I stated my expert opinion that there is no short-, medium-, or long-term reliability need for Invenergy's proposed plant. 2016 PUC Testimony, page 3, lines 21-27; 2017 Direct Testimony, page 2 line 18 – page 3 line 3; 2018 Supplemental Testimony, page 11, lines 6-11; September 2018 Memorandum, page 3 ¶ 3; *id.*, page 4 bullet points at top of the page.

In this Memorandum I restate this conclusion: there is no short-, medium-, or long-term reliability need for Invenergy's proposed plant. In this Memorandum, I provide further, additional evidence for this conclusion – evidence that was not available as recently as my last submission in this case, on September 14, 2018.

### Importance of Data Sources

In all five of my submissions (the four previous ones and this one) I rely on one principal source of information: ISO NE documents and materials. In my 2016 PUC Testimony, I also cite two Invenergy documents. In this testimony, I also rely on a recent (11/19/2018) FERC Order accepting ISO NE's termination of Invenergy's Capacity Supply Obligation (CSO) for unit 1 or Turbine One.

In some cases, the charts, tables, and graphics contained in and the exhibits attached to my testimony are ISO materials or documents that I have reproduced (with the source appropriately cited). 2016 PUC Testimony, Figure 9 on page 25; Figures 10 and 11 at page 26; Exhibits B, C, and F; 2017 Direct Testimony, Figure 1 on page 13; Table 2 on page 14; Figures 3 and 4 on page

25; Figure 5 on page 26; Figure 6 on page 30; Exhibits 2, 3, 4, 5, 6, and 7; 2018 Supplemental Testimony, Figure 1 on page 8; Tabs B, C, and D.

My 2016 PUC Testimony is representative. On page 3, lines 1-18, I list the ISO documents that support my opinion that there is no short-, medium-, or long-term reliability need for Invenergy's proposed plant. Those ISO documents include multiple ISO CELT Reports (CELT = Capacity, Energy, Loads and Transmission); ISO's Regional System Plan; ISO Installed Capacity Requirements, Local Sourcing Requirements and Capacity Requirement Values for the System-Wide Capacity Demand Curve for the 2019/20 Capacity Commitment Period; ISO-published Forward Capacity Auction 10 Results Summary and Trends; ISO Internal Market Monitor 2015 Annual Markets Report; and an ISO filing with FERC (Federal Energy Regulatory Commission) on the results of FCA-10.

In my 2017 Direct Testimony, I incorporated my prior 2016 PUC Testimony, and additionally relied on four newer ISO documents. They are listed on page 4, lines 3 – 12, and are attached as exhibits to that testimony.

In my 2018 Supplemental Testimony, I relied on four additional ISO documents; they are listed on page 9, at lines 9 – 20, and all of them are attached as Exhibits to that testimony.

Some of the charts, tables, and graphics contained in my testimony are tabulations done by me and/or other staff at Synapse Energy Economics based upon ISO publications (with sources appropriately cited). In each of these cases, I explained how these tabulations were derived, how the results pertain to this case, and what the tabulations say about the need for the proposed Invenergy plant. For example:

- In my 2017 Direct Testimony, Table 3 on page 20 is a tabulation of data from three consecutive ISO CELT forecasts (2015, 2016, and 2017). Each respective CELT forecast contains projected peak load (growth or decline) over a ten-year forecast period. The figures in Table 3 come from ISO NE, but the tabulation was created by Synapse. I then explain that the chart shows negative net peak load growth for both New England and Rhode Island (Id., page 21, lines 1-7); I explain that this is important because ISO NE's capacity needs (including possible need for new plants like Invenergy) are based on net peak load forecasts (id., page 21, lines 8-16); and that these ISO NE figures are relevant to this case because this “demonstrates that earlier load forecasts, on which the need for the proposed plant was premised, are now no longer accurate. . . .” (Id., page 21 line 17 – page 22, line 7).
- In my 2018 Supplemental Testimony, Table 1 on page 9 is a tabulation of figures from two consecutive ISO CELT Reports (2017 and 2018). The figures in this Figure 1 come from the ISO, but the tabulation is by Synapse. I explain how these data are relevant to this case: “The ISO's recent action to disqualify Invenergy's Turbine Two from participation in FCA-12, taken together with the other data I discuss above, provide new evidence of those facts. There is no short-, medium-, or long-term need for either of Invenergy's two turbines.” Id., page 9, line 10 – page 11 line 11.



- In my September 2018 Memorandum, Table 1 on page 6 is a tabulation of figures from three Final and one Draft ISO NE CELT Reports (including Final 2015, 2017, and 2018). The figures in this Table 1 come from the ISO, but the tabulation is by Synapse. I explain how these data are relevant to this case: “These data are important because they show declining future demand for electricity in New England for the period when the proposed Invenergy plant may come on line (the 2021-2023 period) and continuing through until 2027. And, as discussed above, this declining future demand comes in the context of the present surplus of capacity in New England and the simultaneous entry of significant new conventional and renewable resources (without Invenergy’s proposed plant).”

### Importance of Trend Over Time

The sequence of events since I first provided testimony in this case in 2016 is important to understanding today’s situation.

In June 2016, CLF filed my direct testimony in PUC Docket 4609 pertaining to Invenergy. My testimony stated that there was no short-, medium-, or long-term reliability need for Invenergy’s proposed plant.

In July 2016, the PUC disagreed with me and issued an Advisory Opinion saying that Invenergy’s proposed plant was needed.

In August 2017, CLF filed my direct testimony in this Docket. There, I provided newly available evidence – evidence that had not been available the previous year at the time of the PUC decision – that confirmed that my June 2016 PUC testimony had, in fact, been correct – that is, that there is no short-, medium-, or long-term reliability need for Invenergy’s proposed plant. More specifically, in my August 2017 Direct Testimony, I detailed six specific areas in which: (a) the PUC had not credited my earlier testimony; but (b) subsequent evidence, not available to the PUC at the time of its initial ruling, showed that I had been correct.

It is my understanding that in his April 26, 2018 Opening Statement, CLF’s lawyer provided the EFSB the specific page and line numbers from my August 2017 Direct Testimony where each of the six issues was discussed. April 26, 2018 Hearing Transcript, page 63, line 3 – page 65 line 13. Note that the summary provided to the EFSB by CLF’s lawyer was prepared by CLF, not by me; but it refers the reader to portions of my 2017 Direct Testimony. I attach CLF’s summary at Tab B and now adopt it as a useful index to important points in my 2017 Direct Testimony.

Each of these six areas is essential to understanding why there is no short-, medium-, or long-term reliability need for Invenergy’s proposed plant. Each of these six areas is a separate example in which subsequent events and ISO NE publications demonstrate that my 2016 PUC Testimony was accurate, and the PUC’s contrary conclusion was incorrect. The guide (summary) at Tab B will direct the reader to the portions of my 2017 Direct Testimony that address each of the six points, listed below:

- The PUC recognized that capacity needs are determined by peak demand. It did not recognize that peak demand is now declining, showing that Invenergy is not needed. It also did not recognize that expectations of peak demand for any given future year generally declined with each successive forecast vintage (e.g., the 2018 forecast for peak demand in 2023 was lower than the peak demand forecast for that year from 2017, or 2016, or 2015 forecast vintages). This crucial point highlights how three-year out forecasts do not necessarily capture whether a certain level of resources will be needed in future years, since the forecasts have been consistently too high.
- The PUC concluded that Invenergy is needed because there is no assurance that other proposed new resources will be built. We now know of multiple, specific, new fossil resources that have been permitted and/or are already under construction or in service.
- The PUC found that new Demand Resources (DR) could not take the place of Invenergy, but subsequent FCAs have shown that this is not true; DR resources directly substitute for capacity provisions otherwise obtainable from Invenergy’s proposed plant, evidenced by the cleared DR resources seen resulting from ISO NE’s forward capacity auctions.
- The PUC determined I over-estimated DR and under-estimated the importance of conventional generation, but subsequent ISO NE evidence shows that my estimations were correct.
- The PUC believed that Invenergy is needed because of possible future retirements of ‘at risk’ plants. New evidence from subsequent FCAs shows that this is not true.
- The PUC concluded that Invenergy is needed because SENE is modelled by ISO NE as an import-constrained zone, but in recent FCAs those possible constraints have not been binding. This is critical because the trend continues to be towards lower overall resource requirements in the SENE zone (because of energy efficiency and small solar PV effects on net peak demand) and thus a high unlikelihood of the constraint binding in future auctions.

As more time passed, additional evidence accumulated supporting my statement that there is no short-, medium-, or long-term need for Invenergy’s proposed plant. It is my understanding that the September 2017 decision by ISO NE to disqualify Invenergy’s Turbine Two from participating in FCA-12 (held in February 2018) was the event that triggered the EFSB decision to permit the parties to file supplemental testimony. However, my 2018 Supplemental Testimony addressed more than the disqualification; it also discussed the results of the ISO’s FCA-12, which had been held earlier in February. I also discussed ISO NE’s January 8, 2018 filing with FERC seeking to lower the Forward Capacity Market’s Dynamic De-List Bid Threshold, and ISO’s newest figures pertaining to future CELT Reports.

I used ISO data that had accumulated in the time since the PUC issued its Advisory Opinion to explain that this “provides ongoing evidence of the lack of any need for the first turbine [of Invenergy] to be available in any year over the next decade.” February 2018 Supplemental Testimony, page 11 lines 1 – 5. In the preceding statement I was referring to the fact that there was no reliability need for Turbine One. I then went on to refer to the entire project:

To be clear: in my previous PUC testimony (June 2016) and EFSB testimony (August 2017) I testified that there is no short-term, medium-term, or long-term reliability need for either of Invenergy’s two turbines in New England. The ISO’s recent action to

disqualify Invenergy's Turbine Two from participation in FCA-12, taken together with the other data I discuss above, provide new evidence for these facts. There is no short-, medium-, or long-term need for either of Invenergy's two turbines.

February 2018 Supplemental Testimony, page 11 lines 6 – 11.

As more time passed, more evidence accumulated that there is no short-, medium-, or long-term need for Invenergy. On September 14, 2018 – three months ago today – CLF filed my September 2018 Memorandum. In that document I updated the EFSB by providing no fewer than seven new pieces of information not previously available that supported my earlier conclusion that there is no short-, medium-, or long-term reliability need for either of Invenergy's two proposed turbines. These seven new pieces of information were:

(1) FERC's recent approval of the newly lowered Dynamic De-List Bid Threshold, which demonstrated that there is a present surplus of capacity in New England, even without Invenergy. Id., at 4-5.

(2 and 3) The final 2018 CELT Report (Id., at 5-6) and the summer peak load in 2018 (id., at 7), both of which confirmed what I stated in my February 2018 Supplemental Testimony that projections of declining peak load in the future (and newer vintage forecasts indicating lower peak load for any given future year, relative to the prior-year vintage forecast) demonstrate that there is no need for new fossil power plants in the future like Invenergy.

(4) The most recent Annual Reconfiguration Auction results showed that there is no need for Invenergy. Id., at 7-8.

(5) The recent decisions by ISO NE pertaining to Mystic Units 8 and 9, which confirmed the accuracy of my prior testimony that the current rate of retirements of so-called "at-risk" plants in New England does not show a need for Invenergy. Id., at 8-9.

(6 and 7) Newly announced procurements of renewable energy including Canadian hydroelectric power; offshore wind in Massachusetts, Rhode Island, and Connecticut (id., at 9-11); and development of storage resource targets (id., at 10-11) show that new renewables and storage resources, in combination with the patterns of lower peak load, can and will serve to ensure a reliable supply of resources in New England if or as older fossil-fuel generators retire. This is a very important point, in part because in July 2016 – when the PUC rendered its decision – none of these large procurements of renewables, or targeting of new storage resources, were known with the level of certainty that now exists.

My September 2018 Memorandum included a section entitled "Connecting the Dots." In that section I included a way of viewing separate data points together. I now update those same four bullet points with additional information:



All of these separate data points must be viewed together in order to understand the broader picture.

- There is a current surplus of capacity in New England; while
- Net peak load seen on the grid, which is a factor in driving future demand for new grid-connected resources, is declining; while
- New storage resource targets in Massachusetts foretell construction of peak load serving storage capacity; and
- The pace of older plant retirements shows no need for additional new fossil-fueled power plants, since substitute demand-side and small-scale renewable resources continue to be available to contribute to the maintenance of reliable operations, and other new fossil resources, such as combined cycle facilities in Connecticut and Massachusetts, have come on-line or will come on-line to meet their CSOs in the next years;<sup>1</sup> and
- Large procurements of new utility-scale renewables are coming into the New England electricity marketplace.<sup>2</sup>

It is important to read my three prior filings pertaining to Invenegy together with the present Memorandum, because the trend demonstrated is important.

September 2018 Memorandum, at 4.

### New Evidence

Following the filing of my September 2018 Memorandum to the EFSB, there have been three new pieces of evidence that support my conclusion that there is no short-, medium-, or long-term reliability need for either of Invenegy's two proposed turbines.

First Piece of New Evidence – On September 20, 2018, ISO NE made a filing with FERC seeking to involuntarily discontinue Invenegy's 485 MW CSO on Turbine One obtained in FCA-10 in February 2016. ISO NE's letter to FERC is brief and reflects the fact that ISO NE Tariff gives ISO NE discretion to take this action in this circumstance. I attach a copy of ISO NE's September 20, 2018 FERC filing at Tab C (ISO Termination Letter).

On November 19, 2018, FERC approved ISO's proposed termination of Invenegy's CSO, and denied Invenegy's waiver seeking to prevent the CSO termination. This is the first time in the history of ISO NE that it has used its authority under Section III.13.3.4(c) to completely and

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<sup>1</sup> Footprint Power, 2018; Towantic, 2019; Bridgeport Harbor 6, 2019 (all combined cycle plants). As gas combined cycle plants, Footprint, Bridgeport Harbor, and Towantic are all relatively flexible and therefore, in combination with existing hydro and other conventional, dispatchable capacity, will be available to help the ISO balance variable-output renewable resources that come on line in the future.

<sup>2</sup> Massachusetts, 400 MW in 2022, and 400 additional MW in 2023; Rhode Island, 400 MW in 2023; Connecticut, 200 MW in 2023.



involuntarily terminate the entire CSO on any Resource. I attach a copy of the FERC Order also at Tab C (FERC Order on Invenergy CSO termination).

As reflected on page 3 of ISO NE's Termination Letter, the legal basis of the termination, found in the ISO NE Tariff which was approved by FERC, is that Invenergy is two or more years behind schedule. The availability (or non-availability) of a proposed Resource during specific Capacity Commitment Periods is very important to ISO NE. However, while the legal basis of ISO NE's termination decision is grounded in the Tariff Section III.13.3.4(c), ISO NE's decision to terminate the CSO directly implies that it will be fully able to maintain system reliability of the electricity grid without Invenergy, a fact supported by ISO NE's November 6, 2018 filing with FERC that opened FERC Docket ER 19-291, concerning the forthcoming FCA-13, discussed in greater detail below.

In addition, as reflected on page 3 of the ISO NE Termination Letter, ISO NE had the right, but not the obligation, to terminate Invenergy. This is important because it means that – had ISO NE believed that Invenergy was needed for present or future system reliability – ISO NE had the discretion not to terminate Invenergy's CSO.

Second Piece of New Evidence – On September 28, 2018, ISO NE issued to Invenergy its Qualification Determination Notification regarding the eligibility of Invenergy's Turbine Two to participate in FCA-13, to be held in February 2019. I attach a copy of ISO NE's most recent QDN to Invenergy at Tab D (2018 QDN). Once again, ISO NE determined that Invenergy's Turbine Two is not eligible to participate in the upcoming FCA-13.

In my February 2018 Supplemental Testimony, I stated that ISO NE's decision on whether Turbine Two would be allowed to participate in FCA-13 “would depend on ISO NE's assessment of how Invenergy's second turbine would be poised to meet Critical Path Scheduling tariff requirements.” February 2018 Supplemental Testimony, at page 6 lines 6-11. My statement was confirmed; that is what the 2018 QDN stated: “The ISO . . . has determined that commercial operation for the aforementioned project is unlikely to occur by . . . June 1, 2022. . .” 2018 QDN, page 2 ¶ 2.

In my February 2018 Supplemental Testimony, I also stated that if the ISO were to disqualify Invenergy's Turbine Two from participating in FCA-13, that fact “doesn't matter – it would very likely not clear in that auction if it were able to participate, just as it wouldn't have cleared in FCA-12 if it had been able to participate.” *Id.*, page 6, lines 9-11; for explanation of why this is true, see *id.*, lines 12-15. I stand by that statement today.

The net result of ISO NE's actions on September 20 and 28, 2018 are that Invenergy's entire project – Turbines One and Two – are barred from participating in FCA-13. FCA-13 will be held in February 2019 for the Capacity Commitment Period June 1, 2022 to May 31, 2023. ISO NE believes that it is able to run the New England electricity grid at least through May 31, 2023 without any electricity from Invenergy's proposed plant.

This is not surprising and is fully consistent with all four of my previous submissions to the PUC and EFSB: that there is no short-, medium-, or long-term need for this proposed plant.



ISO NE estimates future resource requirement determinations and guides future procurement need by examining relevant factors. These factors include, but are not limited to, future net load trends (positive or negative) inclusive of behind-the-meter resources, the rate of retirement of existing older-vintage plants, and other proposed utility-scale resources in the interconnection queue. In other words, the ISO did look at relevant variables when it decided that it could run the New England electricity grid through May 31, 2023 with no contribution from Invenergy.

Third Piece of New Evidence – On November 6, 2018, ISO NE made a filing with FERC regarding the net-ICR values for the upcoming FCA-13, to be held in February 2019. I attach a copy of ISO NE’s filing at Tab E (without the attached testimony), and I refer to this as ISO’s November 6 FERC Filing. In response to ISO NE’s November 6 Filing, FERC opened its Docket ER 19-291.

The Net Installed Capacity Requirement (Net-ICR) that ISO NE is seeking to procure in FCA-13 is 33,750 MW. Existing Capacity Resources now on the system are greater than that; Existing Capacity Resources now total 33,867 MW. Sedlacek/Scibelli Testimony, at page 19, found at [https://www.iso-ne.com/static-assets/documents/2018/11/icr\\_filing\\_fca\\_13.pdf](https://www.iso-ne.com/static-assets/documents/2018/11/icr_filing_fca_13.pdf). Going into FCA-13, there are an additional 8,716 MW of new entry qualified by ISO NE to participate in the upcoming auction, coming from a total of 238 newly qualified resources. This is more than double the 3,223 MW of Resources that are seeking to retire in FCA-13.

All of the foregoing ISO figures are without Invenergy being qualified to participate in FCA-13. That is, ISO NE’s November 6 FERC Filing is powerful evidence that my prior testimony has been accurate all along: there is no short-, medium-, or long-term reliability need for Invenergy. The ISO has more than enough qualified Resources – existing Resources and newly qualified Resources – going into FCA-13 to make for a robust auction, without Invenergy.

### Other Issues

Renewable Projects Without CSOs – CLF has asked me to comment on the portion of Ryan Hardy’s Second Supplemental Testimony dated September 14, 2018, page 7 lines 15-24. Mr. Hardy says “If one were to argue that a facility is not needed unless it has a CSO, then virtually all renewable generation is not needed. To date, only 10% of renewable capacity in New England has a CSO through the FCA.” He also states, at page 7 lines 22-24, “I believe everyone would agree that just because a renewable generation facility does not have a CSO, it does not mean that the facility is not needed. The same is true for thermal generation.”

Mr. Hardy’s analogy between renewable and conventional resources is highly imperfect; his logic is flawed because new fossil-fueled thermal resources have comparatively different expectations for the sources of revenue they need than new renewable resources. Renewable resources often do not require a CSO in order to be built because renewable resources produce clean energy, in which most of the value is captured by energy and renewable credit payments, based on state needs for renewable energy. Fossil-fired plants, especially new units, on the other hand explicitly need to rely on capacity payments in addition to “energy margin” they obtain in the energy market. They don’t produce clean energy, so they don’t receive any renewable





energy credit payments. Thus, his statement that “the same is true for thermal generation” does not bear up under scrutiny because in the current framework for capacity payments in New England, new fossil-fired thermal resources must have a CSO in order to be viable. Invenergy’s proposed plant has no CSO.

Plants “At Risk” for Retirement – CLF has asked me to comment on the portion of Mr. Hardy’s Second Supplemental Testimony dated September 14, 2018, page 8 line 5 – page 10 line 15. Mr. Hardy’s discusses his view that Invenergy’s proposed plant may be needed because “there is still a significant amount of capacity at risk for retirement.” Id., page 8 lines 5-6.

This is not a new issue, and I have addressed the matter of the rate of retirements of at-risk plants twice before in this EFSB.

In my June 2017 Direct Testimony, I discuss in detail ISO NE’s concern about the pace of retirement of at-risk units. June 2017 Direct Testimony, page 12 line 11 – page 16 line 8. I explain “the most current ISO NE information on the overall status of the ‘at risk’ plants.” Table 2 on page 14 is a list of ISO NE’s at-risk plants, showing the capacity, fuel type, zone, and in-service date for each one. I analyze in some detail what this detailed listing means for this case. I state: “The data . . . show, when considered in the context of declining net peak load, surplus capacity, and intended additions of renewable or clean energy capacity, that the economic retirement of older fossil units in New England will not leave a reliability need for the proposed Invenergy plant.” Id., page 15 line 21 – page 16 line 3.

I stand by that statement today.

In my September 2018 Memorandum, I discuss the issue of retirement of ‘at risk’ units, starting on page 2. I return to the issue on pages 8-9, with a further discussion of the most recent actions of ISO NE and FERC with regard to the Mystic 8 and 9 units. I state my conclusion on page 9: “The ISO decision to retain these plants, now approved by FERC, substantially undercuts any argument that the possible retirement of plants in New England shows the need for Invenergy between now and at least through the summer of 2024.” Id., page 9, ¶ 1.

I stand by that statement today.

ISO NE’s decision (evidenced by termination of the CSO) that it could reliably run the New England electricity grid at least through May 31, 2023 without Invenergy was unlikely to be taken casually or lightly. ISO NE considered all relevant factors, including, but by no means limited to, the risk of retirement of future plants. ISO NE’s actions undercut Mr. Hardy’s assertions.

Net-ICR Trend Over Time – CLF has asked me to address the fact that the Net-ICR for the upcoming FCA-13 of 33,750 MW (without Invenergy) is 25 MW higher than the Net-ICR for the previous FCA-12. The increase of 25 MW from FCA-12 to FCA-13 is very small and is certainly not evidence that Invenergy is needed. As I discuss above, there are more existing Resources on the system today than the entire Net-ICR for the upcoming FCA-13, not counting newly qualified Resources.



The Net-ICR for the upcoming FCA-13 includes a new assumption that the region will increase system reserves from 200 MW (used for prior auctions) to 700 MW. Nevertheless, there was no corresponding increase of 500 MW in the Net-ICR because of decreasing load forecasts. As ISO NE said: “Due to the decline in the projected loads determined as part of the load forecast for 2018 versus those forecast in 2017, the net installed Capacity Requirement for FCA-13 (33,750 MW) is only 25 MW higher than the net Installed Capacity Requirement for FCA-12 (33,725 MW). Thus, the impact of the increase in the system reserve assumption is effectively netted out by the decline in the load forecast for 2018.” Sedlacek/Scibelli Testimony, at page 35, found at [https://www.iso-ne.com/static-assets/documents/2018/11/icr\\_filing\\_fca\\_13.pdf](https://www.iso-ne.com/static-assets/documents/2018/11/icr_filing_fca_13.pdf).

Also, the Net-ICR for upcoming FCA-13 is 1,284 MW lower than the Net-ICR of 35,034 MW was for FCA-11 (held in 2017); the Net-ICR for upcoming FCA-13 is 1,376 MW lower than the Net-ICR of 35,126 MW was for FCA-10 (held in 2016); the Net-ICR for upcoming FCA-13 is 1,392 MW lower than the Net-ICR of 35,142 MW was for FCA-10 (held in 2015).

The generally downward trend of Net-ICR over time is additional evidence that, when coupled with the evidence on increasing availability of new renewable and storage resources, supports my overall testimony that there is no short-, medium-, or long-term need for Invenenergy’s proposed plant.