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COMMENT ON MEAN'S INTEGRATED RESOURCE PLAN

Dear Ms. Coleman:

Please accept this as a comment from Sustainable Development Strategies Group of Gunnison, Colorado on MEAN'S draft Integrated Resource Plan [IRP]. We have previously sent other comments, which we also hope will be considered.

We continue to be deeply concerned that MEAN, which should be encouraging public comment, has done so much to limit and discourage public comment. Forward looking organizations should want to get as much feedback as they can from their customers and other stakeholders. It helps them improve.

PRINCIPAL ISSUES FOR COMMENT

These are the issues and concerns that we will try to address in this letter.

- 1. Relationship to 2050 Vision and Lack of Interim Goals**
- 2. To What Extent are Technological Advances Needed?**

- 3. Failure to Develop a Strategy for Exit from Coal**
- 4. Demand Side Management not Properly Treated**
- 5. Advanced Metering**
- 6. Coal Prices**
- 7. NREL Electrification Futures Study**
- 8. MEAN a Minority Owner; the Future of MEAN's coal interests**
- 9. Advantages of Renewables**
- 10. What is "Future?"**
- 11. Community**
- 12. Is MEAN Really Going to Support a Gas Plant?**
- 13. Participant Owned Generation**
- 14. Problems With Public Participation**
- 15. The "100% Renewable" Hoax**
- 16. WAPA Displacement Agreement**

1. Relationship to 2050 Vision and Lack of Interim Goals

There is a 2050 "carbon neutral" goal. But no interim goal. The IRP uses a 15 year planning horizon, so it fails to engage with the 2050 goal, and does not provide for orderly progress in that direction. Instead it simply assumes

something like the current use of coal all the way out to and well past the 15 year planning horizon.

The MEAN directors generally favor setting an interim goal, but MEAN has taken no steps to adopt one.

MEAN's [2050 Vision](#) states that the plan to achieve the carbon neutral goal will be "initiated in MEAN's 2022 Integrated Resource Plan." But the IRP stops far short of this stated objective.

While the IRP considers renewable energy resources and a future carbon tax, and the renewable resources came out looking very competitive in the results, the fact that the IRP modeling did not include the 2050 Vision goal (or some intermediate goal) as a modeling constraint (e.g., "we should get halfway there by 2030") results in an IRP that isn't very helpful or informative in how MEAN will attain it's 2050 Vision.

MEAN's own projections of its carbon intensities are generally flat throughout the 15-year timeframe. We do not see a plan to meet the 2050 Vision in the IRP. While there are some declines in emissions in some of the future portfolios MEAN considers, in general the IRP seems to be based on "more of the same for the next 15 years."

You could compare this to running toward a wall blindfolded. We all know there is a wall coming up, but since we can't see it yet, we will "consider a range of options, some of which involve slowing down a little."

Utilities in Washington state have a similar goal to be carbon-free by 2045. Many of them have extended their IRP analyses to cover all the way to 2045, with the clean energy requirements included as part of the modeling, ensuring that they will come up with the least cost and least risk way to comply with the requirements.

It seems that the "**2050 Vision**" is out there, but there is a dearth of any clear set of steps to get to this goal, and not much clarity on what the vision really is. At p. 17 the IRP leaves all the options open when it talks of "transitioning MEAN's wholesale power resource portfolio to achieve carbon neutrality by 2050 through the elimination of carbon emissions or balancing emissions with carbon removal through carbon offset mechanisms."

Leaving all the options open is not a plan. Planting trees in Africa while continuing to burn coal? Buying RECs? Should we not be moving toward the goal incrementally? The IRP really does not say how the goal can be achieved.

MEAN clearly needs to do what 2/3 of its members have said they want to do, and adopt an interim goal – perhaps for 2035. "As part of the January 2021 renewable survey, the members were asked whether MEAN should consider establishing an interim goal for a carbon-free percentage in our portfolio. Of the respondents, 65% answered in favor of an interim goal." p. 135.

2. To What Extent are Technological Advances Needed?

The IRP states that achieving MEAN’s 2050 vision “will require industry advancements and technological innovations, particularly those that add stability to the grid and offset the intermittent production of renewable energy such as from wind and solar resources. Other needed advancements include the development of dispatchable renewable baseload energy resources, the increased availability of economical energy storage solutions and affordable deployment of carbon capture, utilization and storage technologies. Potential solutions are not yet viable on a utility scale or economically feasible, and emerging technologies must still be developed” in order for MEAN to meet its carbon neutral goal. See p. 133.

But this should not be used as an excuse to avoid making progress. We can clearly get most of the way there with the technology we have, as many other utilities are proving.

In general, the best analyses show that grid reliability can be achieved at up to 80% to 90% renewable penetration via a combination of battery storage (utility scale, home batteries, and EVs), demand flexibility (especially demand response in buildings), some increased transmission (see NREL SEAMS study, <https://www.nrel.gov/analysis/seams.html>), and some overbuilding of low-cost solar and wind. Getting to 100% will likely require some form of long-duration energy storage, options for which are covered in the following NREL summary report: <https://www.nrel.gov/analysis/storage-futures.html>. That web page also contains other good links.

Some other valuable resources are:

LA100 Study: <https://maps.nrel.gov/la100/report>

Berkeley 2035 Study: <https://www.2035report.com/electricity/>

NREL Renewable Electricity Futures Study: <https://www.nrel.gov/analysis/re-futures.html>

Accelerating the US Clean Energy Transformation,
https://www.colorado.edu/rasei/sites/default/files/attached-files/accelerating_the_us_clean_energy_transformation_final.2.pdf

MEAN is moving much more slowly than XCEL and other utilities nationwide in reducing emissions. There is no reason that this needs to be the case.

The percentage of fossil fuel generation is apparently going up from 51% today to 59% in 2029 (pages 13-14 of executive summary). And MEAN seems to plan to still be at 50% coal in 2038!

3. Failure to Develop a Strategy for Exit from Coal

MEAN makes a great deal of the supposed “reliability” of coal as an energy source, and downplays the risks, especially the environmental and regulatory risks. MEAN never makes a clear statement that it accepts climate change as a problem or that it recognizes the role of coal in driving climate change.

And it does not develop a strategy, or even an alternative scenario, for exit from coal.

One of the real weaknesses of the IRP is that it does not contain a clear or candid discussion of when MEAN’s existing coal driven generation is going to be closed, or at least no longer available to MEAN.

There are all kinds of statements in the public domain about how long these plants may operate, and when they may close. These are issues of vital importance to workers and the communities in which these plants are situated.

The only place that nothing is being said about this question is in the IRP.

Here is some information we have been able to gather. If there is better information out there, MEAN needs to find it and say something about it in the IRP.

Full Name of Plant:	Location: County and State	Capacity (Megawatts):	Does MEAN own interest or just contract:	If owned, what percentage and who are other owners:	Closure date:
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Lousia Generating Station	Louisa County, Iowa	746 MW	Contract	Central Iowa Power Cooperative, 4.6%, City of Geneseo - (IL), 0.5%, City of Tipton - (IA), 0.5%, Eldridge City Utilities, 0.5%, Harlan Municipal Utilities - (IA), 0.8%, IES Utilities, Inc. 4%, MidAmerican Energy Co. 88%, Waverly Municipal Elec Utility, 1.1%	2043 ??
Laramie River Stations	Platte, Wyoming	1,710 MW	Percentage	MEAN: 1.7% Basin Electric Power Coop, 42.2%, Heartland Consumers Power Dist, 3%, Lincoln Electric System, 10.5%, Los Alamos County, 0.6%, Missouri River Energy Services, 16.5%, Municipal Energy Agency of NE, 1.7%, Tri-State G & T Assn Inc, 24.1%, Wyoming Municipal Power Agency, 1.4%	(Rumored) 2033
Walter Scott Energy Center Unit 4	Council Bluff, Iowa	1,660 MW Began commercial operation in 2007	Interest	Joint Ownership Agreements with MidAmerican MEAN: 6.92%	(Suggested 2024)
Neil Simpson Generating Station	Campbell, Wyoming	80 MW	Contract	Sole owner is Blackhills Power INC. Mean has power purchase agreement	2023 (purchase agreement expires) The purchase may continue until May 31 2028
Wygen Station 1	Campbell, Wyoming	70 MW Commercial operation began february 2003	Contract	Blackhills Power INC: 76% Mean undivided 23% interest	2032 (Purchase agreement expires)
Whelan Energy Center Unit 2	Adams, Nebraska	297 MW Commercial Operations: May 2011	Contract	Sole owner is the City of Hastings Holds an entitlement share of 36.6%	2041
Gerald Gentleman Station	Lincoln, Nebraska	1,365 MW	Contract	Nebraska Public Power District,	Unknown

				100%	
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MEAN and its customers are rightly concerned with risk. It seems likely that MEAN can reduce risks to its customers by moving away from coal generation as soon as possible. **But the IRP fails to evaluate a scenario in which MEAN moves away from coal as rapidly as practicable.**

The IRP does say at 61: “There is increased concern by the public, the scientific community, and Congress regarding environmental damage resulting from the use of fossil fuels. There are a number of pending or recently enacted legislative proposals in Congress and state legislatures that may affect the electric utility industry.”

MEAN needs to take this on and honestly ask the questions:

- How quickly could MEAN reduce its reliance on coal?
- What would be the consequences of such a strategy?
- How would it hurt MEAN? How would it help MEAN?

The IRP does say at 42: “Throughout MEAN’s footprint, continual efforts will be made to acquire additional load **and extend terminating contracts.**”

We do not think that MEAN should be extending coal contracts. The IRP certainly provides no justification for doing so.

There are some really significant questions about the future of MEAN’s coal portfolio that MEAN simply fails to address in the IRP.

UNANSWERED QUESTIONS ABOUT COAL PLANTS			
Name	IRP page	Statement	Question
Whelan Energy Center Unit 2	98	The previous power sales agreement dated June 9, 2008, between Hastings Utilities and MEAN ... expired on April 2018	What is the current agreement? How long is it in effect? What if any obstacles are there to MEAN terminating any further purchases from this plant?
Walter Scott, Jr. Energy Center Unit 4	99	MEAN’s ownership interest and partial assignment of interest in	How long it this plant expected to stay in operation?

		WSEC4 provides MEAN with approximately 59 MW of capacity and energy, providing MEAN with a long-term, cost-based source of power and energy	How does the cost of energy from this plant compare with cost of energy from alternative sources?
Nebraska Public Power District	99	The NPPD Agreement is effective through December 31, 2023.	Is there a reason to attempt to extend the agreement beyond this date? If so, what is the rationale? How does the cost of energy from this plant compare with cost of energy from alternative sources?
Laramie River Station	100	MEAN began making purchases of electric power and energy under its original agreement with LES on June 1, 1982.	How long is this plant going to stay in operation? How long is MEAN going to keep buying energy from LRS? What obstacle would there be to MEAN ceasing these purchases in the near future?
Wygen Unit I	100	Wygen I is collocated with the WyoDak coal mine	What are the coal reserves? How long is Wygen I likely to operate?
Neil Simpson Unit 2 and Wygen Unit III	101	MEAN will now receive a combined 15 MW of capacity and energy from the two units until May 31, 2023. At the end of this term, the purchase will continue at 10 MW until May 31, 2028 unless unilaterally terminated by MEAN	Would it be in MEAN's interest unilaterally to terminate this agreement? Why or why not? How does cost of this energy compare to other potential sources?
Louisa Generating Station	101	continues for the term of Waverly Utilities'	What is the term of this agreement?

		Long-Term Power Supply Contract.	Would MEAN be better off ending this agreement in the near future? Does MEAN have the right to do so?
Whelan Energy Center Unit 1	102	The Participation Power Sales Agreement terminates on ... the date Hastings removes the Whelan Energy Center and/or its associated transmission system from commercial operation.	When is that likely to be?

The IRP clearly needs to come to grips with these questions.

At 10 the IRP says: “MEAN is not a majority owner or operator of any of its resource contracts. As such, many of these resources will remain in MEAN’s resource portfolio for the entire service life of the asset, despite MEAN’s 2050 Vision for carbon neutrality. Although this poses a challenge in terms of carbon emissions and the required offsets to achieve neutrality, MEAN acknowledges the reliability and resource adequacy offered by such resources.” See also p. 93.

This seems to be an easy way out of dealing with the questions raised above. But MEAN has provided little or no basis for the idea that it is “trapped” into owning these coal interests and there is nothing that can be done.

4. Demand Side Management not Properly Treated

We can reduce the need for generating capacity if we can manage load to reduce power requirements, particularly at peak times. There are many different methods that have been used, and many utilities seem to be making progress. Why is MEAN unable to do better?

It is not at all clear why MEAN is finding lower values in demand side management and energy efficiency programs than the great majority of the other utilities, causing concern that there is a problem with MEAN’s methods.

In the IRP there are two existing and implemented programs outlined and detailed. The IRP states that they are being utilized in “46 MEAN communities participating in the program to date,” (IPR pg 129). Considering there are many more communities that take and use electricity from MEAN, what steps are being taken to broaden these programs?

Many demand side management approaches require citizen involvement and participation. But there seems to be no indication at all that enlisting customer cooperation is a priority for MEAN; Saying the Survey didn't gauge interest in continuing or adding any programs, It looks like that wasn't the point or even a question in the community survey. Meaning that there is simply no data because there wasn't an initiative to gather any.

2. Community Programs

The participant DSM survey did not indicate any intentions to discontinue any existing DSM programs administered within MEAN communities. Therefore, it is assumed that all existing programs will continue into the future. The future rate of growth in demand and energy savings is unknown. Some of the programs are newly implemented and therefore do not have estimates of savings. Still others are not separately metered, and therefore do not have exact savings measured. As more data is collected and communities continue to invest in metering systems, it is expected that the actual savings attributable to these programs will be further quantified in future years.

The overall lack of information regarding Demand Side Management which has been seen throughout this entire IRP process.

There are many resources setting out current and emerging practice in Demand Side Management. This is a particularly good one since it covers how these resources are included in IRPs:

<https://media.rff.org/documents/RFF-Rpt-Burtraw-Duncan-2.pdf>

See also Behrangrad,

<https://www.sciencedirect.com/science/article/abs/pii/S1364032115001860>

And Section 4.2 of Logan, <https://www.nrel.gov/docs/fy21osti/78645.pdf>

If so many other utilities are finding ways to make DSM work beneficially for their customers, why does MEAN find that “[t]herefore, none of the potential programs would prove beneficial to MEAN and the end-use customer to a point that would compensate for the required costs.” P. 24.

Is there something wrong with the methodology MEAN is using to evaluate these resources?

Did the modeling underestimate the potential of Demand Side Management? The assumption was less than 4% in any DSM programs, so it was not included at all in the plans. How does this compare with other more successful DSM programs from other utilities?

They give “entities more opportunity to reduce overall system carbon emissions with the possibility of serving this load with carbon free resources.” IRP p. 6.

5. Advanced Metering

Advanced metering options help implement time of day rates, which give customers an incentive to shift load out of peak times, and also allow load to be managed. But they do not in themselves make progress unless they are coupled with other measures such as improved rate structures or load management.

The IRP notes at 24: “MEAN is working on a project to provide advanced metering infrastructure (AMI) services to member communities. In response to member community interest, MEAN conducted an RFP for pricing of an aggregate AMI procurement. Fourteen (14) communities have signed letters of intent to participate in this project, representing a total of approximately 10,500 meters. Participating communities could use this system to perform demand side management at the individual meter level. With the proliferation of residential distributed generation, electric vehicle charging, and residential energy storage, AMI offers significant opportunity for demand control for the enhancement of DSM technologies. The use of DSM allows communities to control their energy peak and by extension, potentially reduce the need for MEAN to procure additional resources in the future.”

We encourage MEAN to continue to explore this alternative.

And to develop the complementary programs, such as improved rate structures and load management that can realize the potential of advanced metering.

6. Coal Price and Availability

The downside of low coal prices is reduced coal availability.

The IRP states at 7: “Despite some years of uncertainty due to the dynamics of domestic and foreign coal consumption, recently coal prices have stabilized and remained relatively low. Coal in most regions has seen flat or declining pricing over the past five years.”

The IRP simply fails to engage with the question of whether there are coal resources available to continue to feed the coal plants on which MEAN is dependent.

We hope you will focus carefully on Leslie Glustrom's comments on this subject.

See as just a few examples **Another blow to coal: Arch to close Coal Creek mine in 2022**

"The reality of a permanently shrinking Powder River Basin coal industry came into sharper focus on Tuesday with Arch Resources announcing it is speeding up preparations to close its Coal Creek mine.

The mine employed about 100 people in the fall of 2020, according to federal data.

The mine will ship about 2 million tons of coal this year then commence full reclamation work in 2022, including "the demolition of the facilities,"

<https://wyofile.com/another-blow-to-coal-arch-to-close-coal-creek-mine-in-2022/>

Also **Wyoming coal mine in Powder River Basin will stop operations**

"Montana's Decker coal mine, also in the Powder River Basin, closed last month."

<https://apnews.com/article/michael-brown-gillette-st-louis-wyoming-coronavirus-pandemic-171b34efa170f856d6dfc293d9f189ab>

And also **PacifiCorp: early closure of Wyo coal plants saves \$599 million**

"PacifiCorp and its 1.9 million utility customers could save \$599 million by retiring several coal-fired electrical generating units in Wyoming and elsewhere — including early closures at the Jim Bridger and Naughton plants — according to a company analysis unveiled last week."

<https://wyofile.com/pacificorp-early-closure-of-wyoming-plants-saves-599-million/>

Question: Will there be coal available to supply the plants from which MEAN is obtaining energy?

Question: Would MEAN and its customers benefit from an early exit from coal?

These questions are central to what we all need to be thinking about, but the IRP largely ignores them.

7. NREL Electrification Futures Study

One of the country's leading renewable energy laboratories has done a study suggesting how much additional electrification is likely. MEAN does not want to use it as a basis for their modeling.

The IRP states at 7 – 8 and various other places: “Load Scenario 4: Electrification scenario, which is based on normalized weather and assumes a high rate of electrification throughout the footprint resulting in a much higher annual growth rate. The inputs to this scenario were informed by NREL’s Electrification Futures Study. This load scenario was not modeled however, as it would require a completely different resource acquisition schedule that would not be comparable to the other scenarios.” See also IRP at 69-70

We think this is precisely the kind of scenario that MEAN should be modeling.

At 69-70 the IRP states: “This move toward electrification would alter MEAN’s resource portfolio as demand and consumption increase and end users require more carbon-free power. This change will also result in changes in the operations and economics of the energy markets.”

Are these not the things we should all actively be striving for?

- Altering MEAN’s resource portfolio?
- End users requiring more carbon free power?
- Changes in the operations and economics of energy markets?

Rather than avoiding this kind of outcome we need to be modeling how to achieve it.

8. MEAN a Minority Owner; the Future of MEAN’s coal interests

Because MEAN is a minority owner in the coal plants, it does not have much say about whether they will stay operational or close. MEAN in general avoids the issue and does not discuss the future of its coal plants, or whether the coal plant closure might in some cases be in MEAN’s interest

MEAN is in an awkward position as it is a minority owner (in most cases a small minority owner) in the coal plants on which it has depended.

But we challenge the assumption that this requires that the “resources will remain in MEAN’s resource portfolio for the entire service life of the asset.”

At 10 the IRP says: “MEAN is not a majority owner or operator of any of its resource contracts. As such, many of these resources will remain in MEAN’s resource portfolio for the entire service life of the asset, despite MEAN’s 2050 Vision for carbon neutrality. Although this poses a challenge in terms of carbon emissions and the required offsets to achieve neutrality, MEAN acknowledges the reliability and resource adequacy offered by such resources.” See also p. 93.

We find this a thin rationale for the conclusion (at 14) that “Out into 2038, MEAN’s energy from coal is projected to remain constant at 50%.”

As pointed out above, MEAN has failed to develop a scenario for an accelerated exit from coal, and has failed to justify the point of view that “as long as it can possibly operate we are stuck with it.”

We predict that many of these plants will close because the owners of the majority interest find that it is in their interest to close them.

Rather than trying to buy up any more fractional interests in coal plants, MEAN should be trying to unload some of its fractional interests – if there is someone out there who would buy them.

“As market conditions change and continue to favor the economics of renewable resources, fossil fuel plants will likely be dispatched at lower levels, which will decrease the energy generation and therefore the emissions without reducing the capacity contribution.” P. 93. The assumption that MEAN has no alternative but to keep these plants in operation seems to be a way to avoid saying that we all wish MEAN did not own these interests.

9. Advantages of Renewables

MEAN seems to concede that there are many advantages to renewables yet still fails to embrace them. Renewables are clearly the low cost option in most circumstances.

The IRP states at 12: “The proliferation of low-cost renewable resources has driven market prices down in recent years. Future environmental regulations are likely to increase the operating cost of fossil fuel units”

And also: “The low or zero cost of fuel for renewable resources lowers the market price at which resources will be dispatched. Therefore, the higher the penetration level of renewables, the lower the market price”

These statements appear throughout the IRP:

- In MISO, “a wind resource for energy generation accompanied by a capacity purchase sized as required for resource adequacy, has a 15-year revenue requirement only marginally higher than that of the lowest cost option, and resulted in a lower cost variance across the pricing scenarios. In addition, Portfolio 4 allows for a 14.8% reduction in SPP portfolio carbon intensity.
- In SPP, the “solar resource in Portfolio 5 had the lowest modeled cost variance and a 15-year revenue requirement that was similar to the lowest cost options. This option is also emissions free and therefore leads to a 16.2% reduction in the portfolio’s carbon intensity over time.”
- In the West. “[t]he proposed portfolio in the west that best achieved the primary goal of low cost was Portfolio 7, the hydropower resource. This portfolio also saw a very low level of cost variance, or cost risk. Being a carbon free resource, the addition of hydropower resulted in a 32.2% reduction in the carbon intensity of the West portfolio. MEAN is aware of hydropower options that may allow for a benefit to a MEAN community.
- “The next lowest cost option in the West was Portfolios 5, the solar resource, with additional leased capacity from member generation. This portfolio carried increased volatility as compared to the hydro option. Solar also offers a local benefit potential and a reduction in carbon intensity of 29.9% in the West.
- “The wind resource, Portfolio 4, has many of the same benefits. This option is lower than average revenue requirement, low cost variance, and reduces the carbon intensity of the west portfolio by 30.3%.”

There are signs that MEAN is coming to the right conclusion:

“After evaluation of bids and consultation with members, MEAN awarded the bid for a total of 14.2 MW-DC of community-sited and -owned solar facilities. Project installation is scheduled to begin in Summer 2022 with all commercial operation dates by Spring 2023.” At 15.

This solution seems straightforward. We should embrace it.

10. What is “Future?”

MEAN has a category of energy supply in its planning documents called “future.” We ask for more explanation of how this will be managed.

At page 14: “Out into 2038, MEAN’s energy from coal is projected to remain constant at 50%. WAPA drops to 15% with the expiration of the WAPA Displacement Agreement. Renewables decrease to 8% as Wind PPAs, the Landfill Gas PPA, and the Shavano Falls Hydro PPA end. MEAN will require an estimated 27% of energy in 2038 from future.”

The idea that at this point in our history reducing carbon emissions from electrical generation is 9th on MEAN’s list of priorities:

- Says more about the weakness of using “member surveys” in a planning process like this, especially using them as a substitute for actual public participation. The MEAN directors are fine people, but they do not represent the broad spectrum of opinion inside or outside MEAN communities.
- In general does not matter much, since the cheapest solutions are also the solutions that reduce carbon.

11. Communities

There seems to be more openness at MEAN about allowing local communities more flexibility in generating part of their own power, and in locating MEAN owned renewable generation in member towns.

The IRP states at 16: “As these programs were initiated in 2020, there are no measured results of energy or demand savings to date. In FY21-22, eighteen MEAN communities participated in the residential energy efficiency programs and 48 projects were completed. This was up significantly from FY20-21 which saw 34 projects completed.”

We are happy to see this progress and encourage it to grow. And we are also pleased to see (42-43) that “MEAN will continue to support efforts by member communities to install qualified projects under the DG Policy. Discussions initiated to explore other distributed technologies, such as energy storage and fuel cells, will continue as well. MEAN will explore the installation of MEAN-owned systems located in member communities and collaborations available with this approach.”

We join in Richard Stromberg's suggestion that solar generation in the western part of MEAN's service area may be a particularly good match with MEAN's historical summer peak demand.

Community level storage also has immense potential which we are only now beginning to tap.

At 69: "Also of recent increased interest are residential energy storage systems, particularly in the territories of utilities that have instituted time-of-day rates. Each installation of DG removes energy consumption from the MEAN system and thereby decreases the resource need, either on a capacity or energy basis depending on the timing of DG energy supply"

In short, as said at 77: "Growing awareness of energy issues and pricing has increased customer interest in owning generation to serve their own load. As technologies become more available and affordable, MEAN Participants and their end-use customers will have more incentive to install distributed generation assets. From residential rooftop solar to industrial combined heat and power to community wind and solar, distributed generation is being aggressively marketed and eagerly adopted. These assets ultimately decrease the load obligation that MEAN has to serve by increasing behind-the-meter capacity. MEAN's Renewable Distributed Generation policy was updated in November of 2019 to increase the size of allowable installation of community-owned and locally-sited renewable resources from 2% of annual energy consumption to 5% of annual energy consumption. MEAN does not limit distributed generation installations of retail end-use customers."

MEAN should continue to revise and update its DG policy to meet the growing interest shown by its customer base, as well as the cost savings this will generate for all MEAN customers, even those for whom reducing carbon emissions is not a priority.

12. Is MEAN Really Going to Support a Gas Plant?

It seems very unclear what MEAN intends for additional capacity in its MISO region. It does sound a lot like they want to build a gas plant, but they seem hesitant to say so.

At 17 the IRP says: "MEAN aims to make resource acquisitions that only decrease the total carbon emissions of our portfolio."

It says at 38-9: "The proposed portfolio in SPP that best achieved the primary goal of low cost was Portfolio 1, the addition of capacity and energy from a natural gas combined cycle plant located in the SPP footprint. This option also provides for operational flexibility and fuel diversity, but not local benefit. Portfolio 1 does not result in a decrease in carbon intensity for

MEAN's resource portfolio.

The IRP indicates at 40 that: "In SPP, MEAN will proceed toward the recommended portfolio option(s) to address the impending need for capacity and energy. MEAN has initiated discussions with and has received proposed cost and performance data from a developers and resource owners in SPP for projects that align with MEAN's needs. The IRP recommendations of the Board will direct these efforts and determine the projects MEAN staff will pursue."

Further, at 41: "In SPP, in accordance with the recommendation of the Power Supply Committee, MEAN will secure a long-term solution for an energy resource for future years."

It appears from the statement at 213 that MEAN intends to make this decision shortly after the comment period on the IRP has closed. This has the effect of denying the public the right to see what MEAN proposes and comment on it in the IRP process. That is a serious error.

Just to be clear. As stated at 38-39: "Portfolio 1 does not result in a decrease in carbon intensity for MEAN's resource portfolio."

Building a gas plant would be a major mistake and we oppose it strongly.

This also would expose MEAN and its customers to the serious risks inherent in current natural gas markets. We find this to be a bit of an understatement given current world events:

"The European energy climate also caused upward pressure on prices. Storage levels in Europe were down due to a more intense winter season in 2020. Wind and hydropower output were low on the European continent as well, meaning increased demand for natural gas-fired power. Europe relies heavily on natural gas from Russia, **which has slowed exports due to political frictions.**" (p. 72)

"Not only are prices high, but pricing has been experiencing considerable volatility, which makes economic projections and modeling less reliable." [73]

"Natural gas prices are likely to remain elevated for years to come. The EIA Short-Term Energy Outlook from January 2022 predicts a continuation of prices around the \$4 per MMBtu range."

MEAN's modeling assumes that Natural Gas is cleaner than coal because of its "emissions factor" but that of course does not include climate considerations of fugitive methane in producing and transporting gas.

13. Participant Owned Generation

Many of the MEAN communities still own the old diesel plants they had in place before MEAN was formed. They are economically inefficient. Yet they are still carried as a ‘ready reserve’ on MEAN’s power supply books, probably because there is some kind of economic advantage to the communities to pretend that they are still operational.

In addition, some communities now want to build and own new wind, solar or landfill methane facilities.

“Under the AMPP, each of these Total Requirements Participants is required, upon MEAN’s request, to supply to MEAN the total committed capacity of its Participant Owned Generation. Each such Total Requirements Participant is required to maintain its Participant Owned Generation in good operating condition. The MEAN Board voted at the May 2017 quarterly meeting to approve a new requirement for Participants to exercise the Participant Owned Generation at least quarterly, with MEAN paying for the fuel consumed during these exercises. Scheduled outages must be coordinated with MEAN.” [96]

“Participant Owned Generation: Several workshop attendees favorably discussed the option of allowing participants to install new behind-the-meter generation to their community fleet and add these units to MEAN’s portfolio through the same contract by which MEAN leases existing generation. This is an option that would fulfill capacity needs in portfolios that add intermittent generation with low capacity accreditation.” [23]

We believe that MEAN should facilitate the development of more Participant owned renewable energy.

14. Problems With Public Participation

MEAN’s main effort at ‘public participation’ seems to be the idea that because its Power Supply Committee and Board of Directors meetings were “open to the public” that there has been a long open public process. The fact that these meetings were never advertised as such and no one understood them as such is evidenced by the fact that so far as we can tell, no one submitted any comment at any of these meetings. It seems that MEAN is now claiming that polling its own Board of Directors is somehow “public participation.”

“To this end, MEAN conducted an online survey wherein the participants were asked to rank a list of criteria in terms of importance in resource selection.” [21] “The criteria were weighted according to the participants’ survey... .”[23].

We believe Appendix A documents that no member of the public (except Tess Peterson) appeared at any of the listed meetings, and no member of the public made any comment at any of these meetings.

- To be clear: MEAN polling its own Board of Directors is not “public participation” in the IRP process.
- To be clear: the meetings listed in Appendix A, which occurred before there was an IRP to comment on, are not “public participation” in the IRP process. Same is true of Figure III-1 at page 53.

It seems key decisions are being passed off to future processes. **“MEAN has budgeted for an updated Strategic Plan to be developed in September 2022.** New goals and action items specific to the IRP and resource planning in general will be used to direct long-term and short-term resource acquisitions and planning.” [51]

Please advise us on what opportunities exist for public participation in the Strategic Plan process.

15. The “100% Renewable” Hoax

MEAN is proposing that, without any change in MEAN’s overall coal-heavy generation mix, some communities can call themselves “100% renewable” because MEAN signs some document saying they are. This is possibly illegal, and certainly misleading and wrong.

The IRP states [17] that “[t]o respond to the disparity in local goals for renewable or carbon-free energy, MEAN offers a Wind Pool and a Landfill Gas Pool where participants can elect to purchase specified amounts of those resources in terms of energy from MEAN’s portfolio. This allows individual communities to control their own resource mix. MEAN communicates annually to participants to inform them of their actual energy mix for the prior year.”

The idea that some MEAN communities would through some legal fiction, become “100% renewable,” while others presumably become “100% coal” is a legal fiction with no basis in reality. It is a form of greenwashing designed to deflect criticism, rather than any sign of progress in arresting damage to our climate.

It has the effect of misleading and deceiving consumers. It should stop now.

16. WAPA Displacement Agreement

There is no clear or coherent explanation of what this agreement is, how it works, or what kind of energy is supplied under this agreement.

At page 97 the IRP says that “MEAN has also signed a Capacity and Energy Displacement Agreement (“WAPA Displacement Agreement”) whereby WAPA provides to MEAN additional allocations of approximately 62 MW of capacity and 237,097 MWh of energy in the LAP footprint, and MEAN provides equivalent capacity and energy to WAPA eastern interconnection customers in Nebraska and Kansas. MEAN commits n47 MW of behind-the-meter participant owned generation and 15 MW of capacity from the WEC 2 coal-fired plant located in SPP to the WAPA Displacement Agreement. MEAN recently extended the Displacement Agreement until May 31, 2029.”

MEAN seems to believe that the energy it receives under the Displacement Agreement is 100% carbon free.

D. Existing Carbon-Free Resources

MEAN currently serves its total load obligation with the following carbon-free resources:

Resource	Nameplate Capacity
Kimball Wind Farm	30.0 MW
Shavano Falls Hydro	7.6 MW
Ridgway Hydro	4.0 MW
Reudi Hydro	4.5 MW
Ainsworth Wind	7.0 MW
Crofton Bluffs Wind	4.2 MW
Elkhorn Ridge Wind	8.0 MW
Laredo Ridge Wind	8.0 MW
Wessington Springs Wind	10.0 MW
WM Des Moines Landfill Gas	4.8 MW
Cooper Nuclear Station	26.0 MW
WAPA Allocations	124.7 MW
WAPA Displacement Agreement	61.9 MW

Figure IX-7

On the other hand, when SDSG requested that MEAN provide us with information on the source of this energy, MEAN replied that it did not know. (May 4, 2022 letter from C. Dibbern, response to Request 4).

On page 95 of the IRP it states: “Under the WAPA Displacement Agreement, MEAN receives hydroelectric generated energy in WECC from the 61.9 MW of capacity in the agreement. Under a Bilateral Settlement Schedule, MEAN pays SPP for the related energy for WAPA’s customers in SPP. MEAN also provides an equal amount of capacity to WAPA’s customers in SPP from various MEAN contracted resources. MEAN does not receive Renewable Energy Credits for this resource.”

At page 98 we find “[d]ue to current and expected continuation of drought conditions in the West, certain WAPA hydropower facilities are anticipating lower generation in upcoming years. As a result, WAPA has reduced the monthly Deliverable Sales Amount guaranteed to Colorado River Storage Project (“CRSP”) customers through December 2022. WAPA will purchase replacement power at market rates to supply the reduced energy as requested by customers. Accordingly, this will increase WAPA’s rates during that time period. MEAN has committed to

supply this power to TRPs that receive CRSP allocations, thereby increasing MEAN's load obligation."

It is not at all clear that this "replacement power" is all going to be carbon free.

Is it accurate to say (p. 17) that "MEAN's current resource capacity portfolio consists of 49 percent non-carbon resources from projects around the region, including Total Requirements Participant allocations of federal hydropower from WAPA. MEAN's actual energy generation from carbon free resources in FY20-21 was over 50% of the total?"

CONCLUSION

As flawed as this public comment process has been, we very much hope these comments are of use to MEAN and others in charting a course to a better electrical system and a better future.

The climate crisis is real; it is upon us; we all need to work together to overcome this daunting challenge.

Sincerely

/s Luke Danielson

Luke Danielson