Duke Energy Indiana
IRP Stakeholder Process
Summarized Meeting Notes
Meeting – November 10, 2020

Welcome and Introductions

DEI– welcomed the stakeholders
Review of agenda
Review of approach to virtual meeting
Introduction of attendees – Name, Organization and what their desired outcome for today is

- Facilitators
- DEI
- Stakeholders

Today is to walk through the process that will be used for the 2021 IRP

- Presenting previous IRP results, lessons learned and how we propose to work with the stakeholders for the 2021 IRP process
- Overview of Load Forecasting
- Engage with stakeholders

Goals of the IRP Process

- IRP Submitted every three years
- 20 Year look ahead
- Plan is created with stakeholder input culminating in a preferred resource plan
- Definition of Preferred Resource Portfolio per IURC Rules

Review of 2018 IRP

Scott discussed the process used in 2018 and reviewed the 2018 results
Review of what optimized portfolio means

Stakeholder question - Which of these scenarios meet corporate scenario goals?
Scott – this is a review of the results from 2018, not what we are proposing going forward
Susan Schechter -

- I suggest we use fewer acronyms and make it more accessible.
- I am alarmed that there is not enough wind in the picture.

Scott- the cost of wind is low, but the cost of transmission is higher – when we look at wind within the state transmission issues are increasing – we think a balance of wind and solar is ideal

Portfolio Selection

Scott reviewed the process used for selecting portfolios including the many factors that go into the decision. Reviewed portfolio selection criteria of PVRR, Market Exposure and CO2 reduction

- PVRR – Low cost
- How we are different than most utilities
- We looked at MISO market and calculated the carbon based upon with market purchases
- We selected moderate for cost and risk
- These are the three criteria we will be looking at for this

Mike Mullett - How do you reconcile Duke Energy versus Duke Indiana?
Scott - Even though we are coal heavy state and utility – we are intending to get to net 0 by 2050

Tony Mendoza - is Market exposure an appropriate measure of risk? Do you have data to support?
Scott - Agreed there are a lot of reasons to discuss, market exposure certainly is one measure of risk and one that the IURC is interested in seeing

Anna Sommer - I don't want to quibble with data – but this is a moment in time analysis – but we need to see the intervening years – There is a reason to really vet the results

Jeff Haverley – what are the cumulative health effects over time? What is the corporate commitment?
Answer - We don't show health impacts – but we show emissions - we are committed to the health of the service territory

Samira Fatemi - clarify answer to Anna – is Duke agnostic to climate predictions?

Clarification - We don't know what the future holds – but we do consider the carbon tax

Anna Sommer - will climate goals be modeled?
Answer – we will work on this with you to find a way to reflect these in the analyses

Mike Mullett

- there is a distinction between modeling climate change and modeling carbon reduction
- importance of modeling emission constraints
- There should be ONE scenario that is aligned with Duke Corporate goals

Stakeholder Feedback - section

Scott discussed the specific stakeholder feedback from the 2018 IRP process and how DEI is proposing to address the feedback in the 2021 process. (see table in presentation).
Scott discussed the 2018 preferred portfolios with the results of the portfolios proposed by stakeholders in the 2015 process.

Lesley Webb – why use 2015 scenarios in 2018
Answer- We asked stakeholders to participate in putting scenarios together but were not successful

Jennifer Washburn – we did not have access to the data in the past and we are looking forward to an opportunity to collaborate

Contemplated changes section

Scott discussed additional changes that DEI is contemplating beyond those that stem from the feedback from stakeholders in the 2018 process. These include:

- Changes to the Encompass Model
- Eastern interconnect modeling to better evaluate resource impacts on power prices
- Risk driven scenarios

- UCAP modeling
- The use of a portfolio tool that will allow stakeholders to identify resource plans that they would like to see modeled
- Edwardsport retirement analysis
- The use of an RFI as input into the process
- Modeling EE and DR as sub-portfolios per earlier stakeholder requests
- Incorporation of DERs and assumptions about DER penetration
- Incorporating impacts on T&D in the analysis.

Susan Schechter –

- does rooftop energy apply as DER? Yes
- How many MW of rooftop are in production?
- The wellbeing of communities is important to Duke – I am pleased to see this – I have been distrustful of Duke
- Methane's increased potency should be considered in each of these reductions

Lesley Webb

- Carmel has just completed greenhouse gas inventory and Duke is the highest contributor – Would an all source RFI be a possibility?
  Scott - once a need is identified and RFP is used to acquire a need

- UCAP modeling?
  Scott – UCAP is a modeling approach – its aligned with MISO

Schedule section

Scott provided a proposal of meeting time frames and topics for each of the meetings. DEI is proposing a total of six meetings

- November 10 – this meeting is the only meeting in 2020. All other meetings would take place in 2021 and would be in person when that becomes possible
- Late January to discuss scenarios, AMI data usage, customer programs and DERs
- March/April to discuss optimized portfolios and other related topics
- June/July to discuss modeling results, and hybrids and stakeholder suggested portfolios
- October to discuss the final results and the Preferred Resource Portfolio

Susan Schechter – if we are able to meet in person will we still have the web functionality for people who cannot travel?
Scott – yes, we will have some form of remote participation available

Jennifer Washburn – for those of us with NDA's how soon will we see the files?
Will we get stuff in advance of the meetings?

Answer: Data will become come available at different times and will be provided as available.

John Dennis (Carmel) – we request you include the results of an all source RFP – We ask that you get rid of coal by 2030

Meghan Anderson – Its unreasonable to ask stakeholders to model their own portfolios

Scott – we would supply a dashboard tool that would allow stakeholders to identify the types of portfolio mixes that they would like to see by certain time frames. Using that input DEI would do the modeling that would produce that type of portfolio and analyze the results.

Anna Sommer- We have gone through stakeholder portfolios – We have had arguments with Duke whether things were modeled faithfully – in the most recent IRP we tried to engage – the results were unrealistic – you need to discuss this more
Scott – we understand and will work with you on these stakeholder scenarios so that you are confident that the output reflects the inputs that you wanted

Load Forecasting

DEI provided an overview model of how load forecasting is used across the industry and within DEI.

Tim Devitt – 30 years of background Predicting future customer, peaks, weather is difficult. Why not use the last ten years instead of the last 30 years?

Anna Sommer – you gave an excellent presentation of how things have emerged

- What about climate change? If we have data that indicates rapid change, is this fully factored into the forecasts

Answer - The answer is no – What we use is meteorology – there are only reliable weather - Climatology does not have the degree of accuracy.

Anna Sommer - there is the data to do it, I know it's a data issue, but I wonder
If we take as given that there will be change – can we not use that?
Factoring in ZERO impacts is a also a prediction and we know that it is wrong.

Samira Fatemi - If weather is difficult to predict – why rely on meteorological data? Why not climate? If statistical significance is important there is an argument of robustness. Statistical significance can be gamed. Why not use the Purdue research and capabilities to support your analysis?

DEI – Shortening the historical view to the last ten years may bring about an answer that is not consistent with the objectives of the stakeholders. What we have seen is that climate impacts are affecting the shoulder months and not the peaks. We are also seeing more extreme weather days in the winter. A shorter historical weather pattern that focusses on the last ten years may produce results that favor conventional generation as a response to the more extreme winters.

Scott – we will look at ways to take into consideration predictions of changes brought about by climate changes

Dr Peter Boerger Are you using load and demand the same way?

Answer – Sales and peaks are forecasted; Load factor is what we use which does not jump around

Lesley Webb - I want to echo Samara's comments to opening your mind to climate data. Basing models on old data is a fundamental flaw – I would urge you to look beyond this we are going – **please work with Purdue climate change**

Joseph Bocanegra? - Why use 30 year weather – if we use a shorter window to weight for more climate impacts

Answer – This would produce too much volatility in the forecast -

Forecast Methodologies - Michael

DEI provided a more detailed explanation of the methodology that it uses and noted that this is standard in the industry and what is expected by the IURC.

- We do bottom up and that makes us consistent with other utilities
- Every forecast is revised twice a year
- Percentage of volume – wholesale – 10 to 15 percent

Chelsea Hotaling - are you making adjustments based on COVID impacts on the upcoming IRP

Answer – we will use a revised Moody's forecast, Moody's has a COVID impact built in and I did not feel that there was a need to adjust it further

Susan Schechter – I noticed that local companies have made promises to make reductions in carbon footprint – this will impact how customers procure energy.
I don't have a good feeling about the past practices of Duke

Tony Mendoza – other utilities have committed to reduce purchase power, will you account for these in the forecast?

Answer to the extent that we know – we have accounted for these

Net Impact to System Load - Matt Kalemba

The presentation identified the expected load and energy growth by customer class over the 20 year study horizon.

Anna Sommer - are you using ITRON as your source?
Answer – ITRON is one of the sources of data

Lauren Aguilar – "This would Indicate that you are not taking managed charging into account yet?
Answer - We agree

Mike Mullett – Can we look forward rather than backward?

- FERC 2222 – Load forecasting is not a looking back
- Load forecasters are the last ones to get the word because they are not connecting with reality
- We need to look at this more organically and start to look at the revolution of IOC
- How do you look at REVOLUTION as load forecasters?

- Duke has a lot of smart people, and I am sure Duke people are thinking about this, and we are not getting
- You need to look at things differently

Answer – we are starting to look more organically at DER's and will continue to do so

Susan Schechter - Would you be interested in promoting community solar?
Answer – yes and that could be included in the results

Annual Incremental EE Savings

DEI reviewed the annual expected impacts from Energy Efficiency

Anna Sommer - This is notoriously unreliable data
We should be using ITRON

Jennifer Washburn - Energy efficiency is competing against sun and wind
The cheapest energy is the energy we save

Wrap Up

DEI asked for any additional thoughts or input

Wendy Bredhold - had requested an evening Q&A on the IRP Process –

Leslie Webb– this sounds like a good idea – most customers are not aware. Is there a way to include really reach out direct to customers?

Scott – We will look into this and see if we can set one up and if there would be interest from customers

Julie? – Surveys by email might be a good way to go

How was the meeting?

Vanry asked the participants for feedback on the meeting and if it was a useful investment in time
Leslie Webb – you did a great job – Carbon – We appreciate Duke's efforts in moving forward

Explicit Commitments from DEI to Stakeholders

DEI made several explicit commitments to stakeholders during the meeting. These are:

- We are open to discussing the market exposure
- We will show the year by year impacts – not simply the end state
- Transparency is important and an overall commitment
- We will endeavour to get information in advance – Jennifer is asking for a couple of weeks)
- Commitment to get back to Susan on whether there are plans to promote community solar

- Commitment to connect with Susan and get an audit team to her house