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GOVERNOR'S OFFICE OF ENERGY

MINUTES
Committee on Energy Choice

June 21, 2017

Technical Working Group on Energy Consumer & Investor Impact:
Divesting Assets & Investments

The Committee on Energy Choice held a public meeting on June 21, 2017, beginning at 10:00 A.M. at the following location:

Public Utilities Commission of Nevada
1150 East William Street
Carson City, NV 89701

The meeting was also available via videoconference at:
Public Utilities Commission of Nevada
9075 West Diablo Drive
Las Vegas, NV 89148

1. Call to order and Roll Call: The meeting was called to order at 10:00AM by Chair James Settelmeyer. Chair Settelmeyer thanked all for attending the first meeting and noted that the agenda will be followed as noticed. The agenda item was opened up for roll call and a quorum was confirmed.

The following Task Force Members were present:

Committee Members Present

Paul Caudill (via video conference)
Erik Hansen (via video conference)
Mark Hutchison (via video conference)
Joe Reynolds
James Settelmeyer

2. Public Comment and Discussion:

Chair Settelmeyer opened up for public Agenda Item No. 2 and asked if anyone from the public sought to make a comment on the matter in both Carson City and Las Vegas locations. No public comment was provided.

Chair Settelmeyer closed agenda item No. 2 and moved to Item No. 3 on the agenda.

3. Election of Vice Chair:

Chair Settelmeyer discussed that after looking through the members of the committee he felt it would be a good idea to think about the concept of having someone who represents business, who is familiar with the concept of the 704B in the exiting of that nature. In that respect it would be his opinion to nominate Erik Hansen for the concept of Vice Chair. He also I thought it was a good idea (in jest) to have someone in Clark County so the committee could "blame him" if someone didn't have the opportunity to speak. The Chair called for a second. Paul Caudill seconded the motion. Chair Settelmeyer asked if there are any additional nominations, none were offered and nominations were closed. A vote was requested and the item passed unanimously. Erik Hansen was selected as the Vice Chair of TWG on Energy Consumer & Investor Impact: Divesting Assets & Investment. Mr. Hansen was congratulated and Chair Settelmeyer thanked him for stepping forward.

4. Presentation: Kevin Geraghty, Senior VP of Energy Supply, NV Energy (Discussion):

Chair Settelmeyer moved onto Item No. 4, which was a presentation by Kevin Geraghty, Senior Vice President of Energy Supply with NV Energy.

Mr. Geraghty introduced himself and provided a bit of history. Mr. Geraghty has been with NV Energy since 2008, and that in his capacity he is responsible for ensuring power for NV Energy's customers throughout the state. Mr. Geraghty has been in the industry of energy supply for 30 years and he had previously worked for a regulated utility on the East Coast that operated in five states, three of which deregulated, one reversed its decision, one considered but did not deregulate. Mr. Geraghty has experience with both buying and selling of assets and the concept of stranded costs and market evaluation and how those markets effect the value of a power plant or contract.

Slide 2: Review of NV Energy: Assets. Assets in supply will be generating plants; purchasing agreements; gas transportation contracts; and workforce, the most important asset.

Slide 3: Brief overview of NV Energy. Three companies: the electric company in Southern Nevada; the electric company in Northern Nevada; and a gas company that serves the Truckee Meadows area in Northern Nevada. Total generation owned and operated by NVE and operating service and customers is approximately 6,000 MW.

Slide 4: Shows the load shape for Nevada. Mr. Geraghty explains there are two other utilities that have a load shape like Nevada's, and that Nevada is unique. Arizona salt river project has loads with high needle peaks like Nevada. With only 6,000 MW, the load hits 8,000 MW in July and August, what the load doesn't include are the reserves required by all utilities. Mr. Geraghty explains that 10% on top is needed, just in case something is lost, like a transmission line, that reserve must be dispatched. If an asset trips, there will be reserves. That shadow in the marketplace is what keeps the grid reliable. Mr. Geraghty explains that the delta between 6,000 that is owned and the 8,000 that NV Energy has to serve is done through power purchase agreements with independent energy companies and market base buy and sell transactions to

satisfy that demand. Investor backed expectations keep those PPA's and their expectations are part of the stranded assets that should be of concerned.

Slide 5: Generating assets owned by NVE. Mr. Geraghty explains that Nevada is really well positioned. Few states are ahead or better than Nevada. Southern Nevada's Reid Gardner location shut down 1st quarter of 2017. Navajo generating station will eliminate NVE participation by 2019, if not sooner. Very recently, Idaho State requested that Idaho power negotiate with NVE to retire one of the North Valmy units in 2019. Most NVE assets compete in the market place, and that the price really determines whether they are on or off. Some exceptions in Northern Nevada are, Ft. Churchill, North Valmy assets, these are must run units because of the reliability of the grid, even if it is uneconomical, units will be put on to protect the grid from failure. In Northern Nevada, not a lot of load except for gold mines and long power lines connecting that load reliability requires North Valmy to be on at times as is the case with Ft. Churchill. Tracy plant in Sparks was formally a must-run unit and it is not today, but may become one again based on the load trends. In Southern Nevada, the Clark Station also has reliability must-run requirements. The issue was raised to come up with market design and that becomes one of the considerations that not all of the resources will be economical dispatch. Some will be reliability dispatch and that must be considered in market design. Mr. Geraghty states that assets NV Energy has are highly flexible, may have the most flexible fleet in the entire country, largely due to technologies NV Energy has and are able to respond to that curve and respond to renewable energy. Policies in the state require that every one of those (renewable) contracts, NV Energy must take all of the energy whenever it is available, so if a cloud comes over a solar plant and goes from 50 MW to 0, NV Energy's assets have to jump in and fill the 50 MW. When the cloud goes away NVE gets offline and get the 50MW taken from the solar plant. This is something NVE does regularly in progressing the State's renewable standards.

Slide 6: Review of PPA (Power Purchase Agreements). Northern Nevada relies on geothermal but there are coal and other renewable energy agreements. Grid-tied solar is now priced very competitively in Northern and Southern Nevada. Chart shows prices for those contracts range from $21.00-$195.00, and expiration dates run from 2018-2044. PC Purchase Agreements and Renewable Energy Agreements are agreements where NVE is either buying portfolio credits or reselling power from solar projects to other customers, but do not add to the amount of energy capacity NVE has. With natural gas prices around $3.00, most all NVE-owned plants can make a MW for around $25.00. Market today in Northern Nevada is around $15.00 off peak, and $30.00 on peak. Today is not average. Prices in Northern Nevada will be over $200.00 at peak as all resources are tight.

Slide 7: In Southern Nevada, almost all contracts are with Natural Gas counterparties or Renewable Energy. Newest renewable energy agreement/PPA compete very well in the marketplace. NVE power plants compete well in the market place. Prices on average in Southern Nevada are about $20.00 dollars off peak and $35.00 on peak. NVE plants make MW for around $25.00 dollars and today over $250.00. Contracts range from almost $34.00-$195.00, expiration dates 2017-2067 (2067 is an agreement for Hoover Power).

Slide 8: How to get the fuel to Nevada? NVE does not have any long-term fuel contracts (gas or coal). There are no long term contracts for the transportation of the coal based on economics of

coal today. NVE has many long term contracts for Natural Gas transportation. Some have expirations and others have evergreen agreements, but those agreements are currently $118 million a year. To deliver gas to customers any given day or year, it is essential to reserve a spot in that pipeline to ensure the obligations to serve can be met. That is the purpose of the transportation contracts: to reserve a spot in the pipe. The type of reservation matters. Obligation to serve is non-interruptible. A lot of IPP will use interruptible service. FERC looked at this gas/electric "nexus." Country has never depended on gas so strongly to achieve peak needs of our customers. A lot of that supply is tied to interruptible gas. A lack of reliability in the gas service causes a lack of reliability in the electric system = nexus. Nevada has not been a concern because the transportation contracts are non-interruptible. Others will lose their share in those gas pipelines before Nevada would be interrupted. The single greatest demand in Nevada is a local distribution company outside of Reno. While the greatest volume of gas is used for electrical generation, in the absence of that generation in some future energy choice state, that absolute requirement to deliver heating gas to the customer in Truckee Meadows likely means that those long-term, firm price contracts and transportation will have to go through the local distribution company. It is a significant cost for a small utility, but there really would not be many choices for heating for customers. There must be enough capacity reserved to move that gas on instantaneous demand by customers. The Committee is requested to think about assets and who pays for that gas pipeline in Northern Nevada. Biggest demand will stay with the regulated gas business in Northern Nevada.

Slide 9: Nevada created a drive for its own independence based on Western energy crisis. Team at NVE is more than 500 people who directly contribute to that daily supply of power. Through the IRP with the PUCN, NVE has created an incredibly reliable supply that is very diverse. Transition from coal to gas has happened without raising rates for the customers which NVE is proud of. One cannot lose sight of the commitment of the employees as NVE considers disposing of supply assets. They have served the customers in the State very well in unique and troubling times from the time the State didn't have power through the growth that went on through 2010.

Slide 10: Generation and supply. Book value estimated in 2020 of generating assets owned by NVE is close to $3.2 billion. NVE-owned fleet supplies 2/3 of energy. While there is 3/4 of capacity, only 2/3 comes from NVE-owned fleet. The remainder comes from purchase agreements and other market purchases that are made within the market in Nevada.

Slide 11: Energy choice. Fundamental assumptions trying to understand the intent of energy choice. NVE may be out of the energy supply business, but will stay in transmission and distribution. Mr. Geraghty states that NVE will not be a provider of last resort or have those obligations. Fundamental to NVE is taking care of the employees that have taken care of Nevada and put NVE in an enviable power supply environment.

Slide 12: Framework to a complex transition. The net present value of the PPA's for periods 2020-2046, is about $4.2 billion that needs to be considered, not including the gas transportation contracts which will have a net present value of about $420 million. There are 564 estimated number of jobs that support energy supply, not including other jobs that may be impacted by restructuring such as customer service, billing functions, grid operations, system operators that

administer the public programs. Competition has changed over the years, and the deregulation in the rust-belt can be studied. In Geraghty's opinion, the only way to dispose of NVE's assets has to be through a stakeholder process not run by NVE. His experience back east was that the utilities sold the assets, then created and made a request for recovery of the stranded portion of that. He doesn't think it is a model that would work well in Nevada. New Hampshire has recently completed this process, run by a utility regulator and allowed for careful consideration of the asset disposition process and how it fit within the policies within the state balance choice competition reliability and investment recovery while delivering the greatest value to customers. With so many unknowns and moving targets, the stakeholder process best for Nevada and its customers is something to be considered when the plants have to be valued. The value is a function of the market and Nevada's policies. So, when considering divestiture, uncertainty is not an ally in the process of selling. Potential buyers will want to know what a Nevada restructured market looks like. What will be considered will be resource adequacy and a planning reserve requirement; how policies dealing with renewables portfolio standards are managed; energy efficiency; net metering; and other public policies which impact their investment decisions. Geraghty is adamant that Nevada should consider the process that New Hampshire used. Today's market is more complex than 20 years ago.

Slide 13: Potential transition costs. Things to consider: Non-supply assets and agreements. When the company stops being a provider of electricity, it will be reconfigured around its new mission to serve right around its new service obligations. There will be non-generation laded items that should be considered for stranded assets and transition costs. For example, NVE has offices that house not just employees but operational functions that we may no longer provide and therefore to optimize costs for our customers, NVE will downsize, move to a different building, or sell the building. Depending on the number of employees that that reconfigured company ends up with, the simple costs of benefits could go up just simply because of less people being enrolled. So, that it will be more than just the power plants and the contracts must be taken into account.

Slide 14: Potential stranded costs. There will be a lot of new oversight requirements and agencies needed. Accountability today is pretty straight forward for reliability and costs. NVE is a fairly transparent examination by a regulator. With choice, a great effort will be needed to hold the market (a collection of participants) accountable for energy-related services and will be a critical consideration. Not lot listed in the presentation are indirect agreements (primarily public programs) which will need to be transitioned away from NV Energy and to the market. The customer education is extremely important and costly. Another cost obligation to consider is net metering. The reality of net metering is that it comes with the required purchase by NVE out-of-the market energy (rate). There is the cost-shift that results from customers not paying their full cost of services. There is an obligation from NVE directly related to energy from rooftop solar, and new transition to other market participants. Consideration will be the value of rooftop solar, and how you get that 20 year obligation managed. A bill that was passed will require energy providers in the future of the structured market to offer the same program, the design of which without single electricity service provided would be very complex.

Slide 16: Power bill. The customers will need to understand the line items on their bill. Because NVE will no longer be providing electric supply, many of the public policy costs that

are tied to power generation sold are going to have to be borne in some way by the market participants. These are significant.

Slide 17: Public policy costs. There are charges that NVE collects from customers to pay different investments or public policy considerations that have to be transferred to somebody. To whom those costs are transferred will have to be considered.

Slide 18: NVE costs. Aside from payroll, there are a lot of other fees and taxes related to energy and energy production. Nevadans must be assured that these taxes and fees are maintained going forward. The market participants and NVE will be accountable for them in whatever future supply is created.

Chair Settelmeyer thanked Mr. Geraghty for the presentation and opened up the panel for questions.

Mr. Hansen inquired about of the gas contracts. For purposes of uncoupling and unwinding, with respect to the LDC (Local Distribution Company) contracts and the contracts associated with supply and gas regeneration, is there one contract or are they separated out? Are there specifically LDC contracts?

Mr. Geraghty indicated that they are not separate to the LDC and to the electric provider. Slide 8 demonstrates that in Northern Nevada there are a series of 29 contracts with 6 pipelines. Most of the gas that comes into Northern Nevada is actually coming out of either Canada or Wyoming, and there are a series of pipes to get it here. As a result, it was largely always developed for the LDC as having the greatest need and volume, but most of the volumes are going on the electric company, but they are not unique to Sierra Gas or Sierra Electric. Yes, they will have to be unwound, adopted by the LDC UE, etc.

The next question was whether there are any clauses in any of those contracts that would allow NV Energy to get out of those contracts because of the change in public policy or change in legislation? Sometimes those contracts have some of those out clauses that would allow NV Energy to terminate those contracts early. Per Mr. Geraghty, there are no such clauses because most of the companies are getting financing from banks and financial institutions which would not put their money at risk with a clause like that.

The next question is whether the contracts are marketable and freely exchangeable (commercial paper)? Can the rights to service be sold or are transferrable? Mr. Geraghty indicated that the money contracts that are somehow above market price, unless that contract came with an obligation to serve a long term commitment to serve if that's the true production cost, then most of those contracts would be very difficult for any entity to just buy and then literally be a merchant. In other words just selling at risk in the marketplace because if those are the prices that those plants need then they're out of the money and likely wouldn't run. So the value of those really has always been the relationship back of the must-buy provision by the utility.

There would be a two party consent for a transfer of rights or service.

The discussion continued about the sale or transfer of contract obligations. There is no developed market for these kinds of long-term contracts. The contracts would be breached. It would be very expensive for a party to get out of their long-term contracts.

Potential solution offered: Nevada or NVE could enter into discussions w/counter parties to negotiate lowering the cost of getting out of the contracts. The rate payers are already paying. Proposal for State of NV to become counter party. There would have to be a consent to assignment if Nevada replaces NVE in the contracts.

Most of the contracts that are outstanding would be for renewables which are tied NVE's renewable portfolio standards. A counterparty looking to assume the rights under a contract would want the other counterparty to be of like terms. It would need to be a high quality counterparty.

A neutral party like PUCN or a newly created entity might have to put the assets out to the market to see what is possible for choice. There is no guarantee that the new asset owner would be the lowest cost to customers.

Question: How do other states with energy choice deal with billing? Mr. Geraghty thinks it is vastly different from state to state and utility to utility.

Joe Reynolds asked questions from a policy standpoint, as extra-judicial statements regarding any matter pending before PUCN. Regarding the State's obligations under the PPA's, what happens to the existing PPA's of NVE that are subject to legislation if energy choice goes forward? How does state live up to the existing RPA standards? There are up to 50 potential contracts with different entities which will involve a lot of lawyers and a lot of conversation. That will require a lot of work.

What would timing of divesting assets via stakeholder process be? In the short term, next year, the committee needs to report to the Lt. Governor as chairman of the full committee with cost estimates. Per Mr. Geraghty, since the valuations depend on the market, the marketplace should be established quickly. Since Nevada is not part of an ISO, it is unique. If the choice will be available by 2023, the marketplace (wholesale) should be up quickly. What is the value of contract or assets? There is no time to wait for the legislative session. Under PRS, who has the obligation to serve? Whether it is the State or marketplace, it has to be regulated. No one will invest in Nevada until they know fixed costs and opportunities.

What it the recommendation for determining by 2018, what the stranded asset value of the generating assets in a 2022 market? Per Mr. Geraghty, he thinks the natural gas would be $1.2 billion for the gas market based on $200 KW. He thinks natural gas value might go down.

With regard to Valmy, Battle Mtn., Ft. Churchill, Yerington, Tracy, Clark (Henderson) which are "reliability must-run" status (RMR): What are the options for those with regard to grid reliability? Per Mr. Geraghty, fixed costs need to be recovered. Some of those kinds of plants stayed with the utility because the utility was responsible for grid management and grid reliability. Is there an investment to make to eliminate the RMR status? Some are old units that

could be retired. Either keep or get rid of the RMRs. For liquidity of market, long-term RMRs are good for the State. Committee could consider ending legislation requiring RMRs to run which would create a very liquid market.

With regard to the uncertainty of South Point, what is the obligation for NVE to serve from now until Nevada enters a liquid market? Long term contracts are preferable. No new assets will be built without any long term contracts without a counterparty that can enter into one. The only long-term assets available for sale are generally thermal assets. The window might close between now and when the market opens to get a counterparties willing to get into short term deals to cover the time gap. The short term deals are more expensive.

Question on Slide 10, $3.2 million value of the asset base is the book value in 2020 of the NVE-owned generating assets. Mr. Geraghty says the sale value is about $1.2 billion. The company has to cover the cost of its fixed assets. The market will be defined by legislation. That could happen in the 2019 legislative session.

To value stranded assets, you have to consider generation assets, plus PPAs (plus the gas transportation contracts), plus non-generated assets. The total would equal the stranded assets. The recovery on those will depend on the market and the contracts. Use New Hampshire as a model for the divesting of assets.

The Federal Government may also develop future policies that could affect all of this.

Slide 4 – What are peak load problems with regard to time of day? For the last 15 years, the peak has been about M-Th, 2:00-5:00pm.

Slide 5 – The One Nevada transmission line is slated to go to El Dorado to go into California. NVE currently doesn't have a plan to expand that line.

Slide 17 – Local government fee is the franchise fee for "right of ways."

Joe Reynolds observes that NVE is a large employer in Nevada. How will energy choice affect the NVE work force? Mr. Geraghty seems to think that the staff will be about the same or lower level. The power plants may have new owners and will probably be able to keep their jobs. NVE will try to absorb current employees. NVE shut down Reid Gardner without letting any employees go. The impact will be 500+ people. The services aren't going away. Paul Caudill also points out that NVE has labor agreements. NVE might have to renegotiate.

Slide 9 – There are approximately 400 people who work at the power plants.

Joe Reynolds wants to make sure that the discussion of the employees doesn't get lost in the process. He would recommend providing for retraining for those displaced employees.

5. Discussion of Issues up for Future Consideration - (For Discussion & Possible Action)

a. Direction from Committee (including, but not limited to):

i. Consideration of physical assets held by NV Energy.

ii. Consideration of contractual obligations held by NV Energy.

iii. Policy recommendations related to the divestiture of physical assets & contractual obligations of NV Energy.

iv. Policy recommendations regarding future regulatory considerations.

Chair Settelmeyer initiates discussion of issues and where the Committee wants to go with regard to stranded assets. He requests a list of the subject assets and a list of the contracts in question. He also thinks the Committee needs to study what other states have done. He thinks the fundamental issue is reliability for the customers. Worker security needs to be managed.

Policy considerations might best be delayed because the requested information about assets and contracts will affect those decisions.

Joe Reynolds raises the issue of making NV Energy whole. The voters are seeking change, but the long-term financial investment of NV Energy must be considered. If the rules of the game change, it is important that NV Energy is treated fairly. With regard to the value of assets, it is important to Mr. Reynolds to hear what NV Energy thinks is fair in the valuation process. A third-party is important for a neutral valuation.

Mr. Hutchinson points out that no one can assume that certain contracts cannot be undone. What are the risks? What are the non-generating assets and what is the value? The gross number needs to be reduced to a net number for valuation. How will assets be disposed in light of that information?

What will be the deliverable of the Committee? The report be an outline of potential stranded assets and risks, as well as the Committee's opinion of possible action. It might be beneficial for the Committee to have PUCN or another independent body write the report to the governor. Mr. Reynolds indicates that PUCN's Policy Advisors can offer the Committee information on the State's resources in this regard. Committee members suggest consulting multiple sources to offer to stakeholders. The Committee can recommend key principles or market designs to reduce the delta.

Chair Settelmeyer indicates that there is no budget for consultants. He suggests that the Committee get basic numbers to give to PUCN Policy Advisors. The Committee decides to obtain a preliminary analysis before consulting a third party.

Mr. Hansen recognizes the efforts of PUCN and NVE, but since PUCN is focused on Nevada, perhaps a broader viewpoint is worthwhile. Joe Reynolds wants the Committee to know that PUCN's recommendations are just one point of view among many.

Chair Settelmeyer is concerned about the lack of involvement in the present meeting. There about 10 members of the public present in both Carson City and Las Vegas.

6. Public comment and discussion.

Chair Settelmeyer opened Agenda Item No. 6 and asked if anyone from the public sought to make a comment in the Carson City or Las Vegas location.

In Carson City:

Hank James, Executive Director of the Nevada Rural Electric Association. He looks forward to discussion the impact of energy choice on generating assets and power supply contracts held by the association's cooperative electric utilities in the State; power districts; and municipals serving the balance of the State at a future meeting of the Sub-Committee.

Fred Voltz

- In early 2000's California's investor-owned utility, SCE, divested themselves of their generating assets and created CalPine. He thinks a similar entity with tweaking would be good for Nevada.
- The topic of State guarantor or counterparty, he suggests that the State Treasurer be consulted with regard to the effect on the bond rating for existing bonds.
- No matter how many consultants or State workers are consulted, the market will ultimately determine the price.

In Las Vegas:

Terry Graves representing the Resale and Retail Electric Supply Association. He wants to reiterate efforts to support Nevada. He wants NVE's stranded cost to be fully and fairly valued. He believes that a third party is a good idea. He can provide references. Pat Wood and John Hanger are available for the next meeting.

7. Adjournment. (For Possible Action)

Chair Settelmeyer thanked all for their participation and attendance, and adjourned the meeting.