1. **Establish polices which support distributed generation, with a specific focus on rooftop solar and net metering.**
   Proposals:
   - **a.** A recommendation that the 2017 Legislature consider a bill to give PUCN specific authority to adopt regulations to oversee the development of distributed resources. The authority to address consumer complaints regarding business practices in the delivery of distributed generation to be consolidated within one agency and develop regulations with input from the Solar Energy Industries Association's Solar Business Code and other stakeholders.
     Background: Distributed generation is and likely will continue to be a growing source of electricity for the State. The PUCN's authority to regulate this growing industry has been piecemeal and focused on encouraging the initial development of distributed resources. The use of Net Metering was initially only offered to 100 customers in the north and south, and has grown substantially since that initial legislation. The authority to regulate this emerging industry should be added without characterizing distributed generation providers as public utilities. Nevada consumers currently do not have a centralized agency to file complaints regarding the distributed generation industry. Complaints are often received by the PUCN, BCP, Contractors Board, NV Energy, and others. This lack of clarity on oversight has created confusion for customers seeking to make complaints. SEIA has established an advisory Business Code to promote transparency, good faith, and understanding in the solar energy industry.

   - **b.** A recommendation that the 2017 Legislature consider a bill to provide the PUCN the authority to require Time of Use/Time of Delivery billing for premises with a distributed generation system if found to be in the public interest.
     Background: Distributed generation provides the greatest benefit to customers and communities when managed to reduce demand during peak and mid peak times. Time of Use and Time of Delivery rates allow customers to take greater control of energy costs and increase the potential value of energy put onto the grid. This authority could help avoid any unreasonable cost shifts, promote the deployment of new technologies such as batteries, and encourage energy efficiency.

   - **c.** A recommendation that the 2017 Legislature consider a bill to specifically direct the PUCN to create a Value of Distributed Solar structured around quantifying the known and measurable impacts both positive and negative internal to the utility of the following benefits and costs:
     i. Energy
     ii. Line Losses
     iii. Generation Capacity
     iv. Ancillary Services
     v. Transmission Capacity
     vi. CO_2 Regulatory Price
     vii. Voltage Support
     viii. Criteria Pollutants
     ix. Fuel Hedging/Diversity
     x. Environmental Externalities
     xi. Utility Administration
     xii. Utility Integration
     xiii. Participant Bill Savings

     Background: Net Metering has been based on the exchange of energy at the retail rate with a focus on increasing the number of customers participating in the program. As distributed

generation has grown to a larger share of energy generation in the State, a more specific and permanent method of quantifying the net benefits and costs of distributed energy resources should be established. The PUCN has begun evaluating these costs and benefits when evaluating all resources (including distributed generation) in dockets in the State's Integrated Resource Plan and General Rate Case.

d. A recommendation that the 2017 Legislature consider a bill to direct the PUCN to ensure that residential and small commercial customers investing in distributed energy resources through 2019 be reasonably certain that future changes in policy and rate design will not significantly lessen the economics of their distributed energy resource investments. One way to accomplish this could be to create 25 MW tranches per year of distributed energy resources in which residential and small commercial customers are guaranteed the current NEM rate structure set by the PUCN as the first phased-in step of the PUCN's Modified Final dated February 17, 2016.
Background: Uncertainty of excess energy compensation rates has resulted in a drastic drop-off of new distributed generation customers. Power purchase agreements establish compensation rates (often for periods of 20 or 25 years) and facilitate financing for capital investment. Similar agreements could be put in place for distributed generation customers.

e. A recommendation that the 2017 Legislature consider a bill to authorize a reasonable minimum bill structure as a compromise measure to resurrect the residential solar market in Nevada. The bill would reinstate retail rate net metering and restore solar DG customers to their prior rate classes. In return, solar customers would pay a minimum bill not to exceed $25 per month to ensure a minimum customer contribution from all ratepayers and to reduce the potential impacts of customer cross-subsidization.
Background: Minimum bills are charges that set a billing threshold under which a customer's monthly bill cannot be further reduced through the application of net metering credits or consumption reductions. Minimum bills differ from other bill mechanisms such as customer charges and demand charges in that they are designed to only impact a limited segment of utility customers, leaving rates and charges for customers who regularly exceed the minimum bill unaltered. Minimum bills are common practice in a range of industries including water, sewage, and telecom. A number of other investor owned utilities, municipal utilities, and states have either implemented or are actively exploring implementing minimum bill mechanisms. Policies that have been implemented range from $10 per month for California's largest investor-owned utilities (PG&E, SCE, and SDG&E) up to $25 per month in Hawaii. These states have some of the most robust solar markets in the United States, suggesting that minimum bills, as implemented, are not fundamentally incompatible with solar market development.

f. A recommendation that the 2017 Legislature consider enabling legislation to authorize community solar (also called Shared Solar, Community Solar Gardens, Solar Gardens) with a focus on expanding solar access to communities of color and low income neighborhoods.
Background: The traditional panels-on-your-roof approach to solar simply doesn't work for a majority of Americans. A majority of Americans face physical barriers that keep them from installing solar on their own rooftop. A report from the National Renewable Energy Lab and Navigant Consulting found that 73-78 percent of homes cannot host solar due to tree shading, orientation or other factors. Moreover, 52 percent of residents nationwide live in multi-unit buildings or homes with shared roofs.

Renters have difficulty participating in rooftop solar even if their home is suitable. The sheer diversity of ways in which tenants receive and pay for their electricity makes solar

participation complex. Some pay their own utility bills, some share a meter and split payments with other renters, and in other cases the landlord pays for utilities and passes a portion of those costs on to the tenant. In all of these cases, there is a fundamental disconnect between the entity that would benefit most from the utility bill savings of solar (the tenant) and the entity who would need to make or approve the solar investment (the property owner).

These issues are particularly pronounced for low-income households, which are more likely to live in multifamily housing, have unsuitable roofs or rent their homes. Community solar addresses these barriers by allowing consumers to subscribe to a local clean energy project and receive credit on their utility bills for their portion of the clean power produced. Fourteen states and the District of Columbia have community solar policies in place, and many more are considering programs to expand consumer access to clean energy.

g. A recommendation that the 2017 Legislature consider a bill to authorize the use of uncommitted Renewable Generations funding to promote the implementation of new technologies, battery storage projects, low income residential solar, and community solar gardens.
Background: The Renewable Generations program was created in 2003 and modified in subsequent Legislative Sessions. The program provides incentives to offset installation costs for solar, wind, and hydro distributed generation systems. Current projections show a surplus of $38.2 million in the Renewable Generations program which could be reprogramed.

h. The New Energy Industry Task Force recommends that the 2017 Legislature consider a bill to incentivize Next Generation Communities (NextGen). The bill will create a new and separate net metering rate class for NextGen communities that are comprised of solely new solar-home and complimented with either large-scale and small-scale residential battery storage. The bill would require an investor-owned utility to offer new net metering to customer-generators within a NextGen community in a manner consistent with systems under NRS Chapter 704 as it existed before the enactment of Senate Bill 374 by the 78th Session of the Nevada Legislature and notwithstanding any statute, rule, or determination of any kind by the PUCN to the contrary for a period of five (5) consecutive years. These customers would be grandfathered for 20 years and the rate would run with the home.

NextGen communities are an all-solar community and comprised of twenty solar-homes or more with the solar technology that is incorporated into the building envelope shortly after the construction of the home and uses large and/or small-scale battery technology. The NextGen community automatically qualifies for rebates used to offset 50% of the batteries' cost. Funding for the battery rebate program shall come from the solar rewards program, and funding shall range from $500,000 up to $1M dollars for each solar community. The NEM applicant will certify that it is part of a NextGen community in the application process with the utility. The utility shall petition the PUCN for cost recovery of utility-scale batteries, and receive accelerated depreciation on energy infrastructure necessary to serve NextGen communities. The PUCN shall have 120 days to examine, approve, deny or modify the utility's petition.

Prior to the conclusion of five consecutive years, the PUCN shall establish a rate for distributed-generating customers in a new solar-home community, in consultation with Nevada's Governor's Office of Economic Development, and relevant stakeholders. The PUCN's analysis shall continue to promote net metering customer-generators in a NextGen community and shall take into account the value of solar and include, but not be limited to:

i. Benefits and value of a mandatory time of use rate structure for NextGen communities;

ii. Value of new load and new revenue for the utility associated with new solar-home communities that include battery storage;
iii. Value of the avoided cost of line loss and fuel used by the utility to meet electric loads and transmission and distribution losses;
iv. Value of the utility's avoided generation, operations, and maintenance costs for all owned non-renewable generation facilities at peak load;
v. Value of reducing load during peak hours;
vi. Environmental benefits and avoided costs to comply with environmental regulations;
vii. Avoided generating costs for a customer-installed storage system, device or technology that can redispatch electricity to the grid;
viii. Fuel diversity;
ix. Diversity of local generation;
x. Account for customer choice and furthering innovative energy platforms;
xi. Cost impacts on Rule 9 line extension policy at the PUCN.

Background: Anticipated Fiscal Impact: up to $3M per year for five years.

Benefits of Proposal

- Transitions an already-evolving grid into a more reliable, resilient and innovative grid;
- Enables new solar home communities to serve a dual function, and provide redispatching function to neighboring communities during outages and/or peak hours;
- Add fuel and generation diversity to a state that is largely relying a single fuel, natural gas, for future generation;
- Continues to facilitate new platforms for new technologies and innovation;
- Reignites an industry that has largely been killed off (e.g., 15 applications for NEM); and
- Increases consumer choice and gets people back to work.

i. A recommendation that the 2017 Legislature consider a bill to amend NRS 704.766 – NRS 704.775 (Net Metering Systems) and any other applicable statute covering rate design for net-metering customers not "grandfathered" into the prior rates:

NRS 704.7735 (ADDED BY SB 374)

- Repeal / Replace applicable sections that are in conflict with TAC proposals
- NEW SECTION (AND SUBSECTIONS) Residential and small commercial net-metering rates shall have monthly basic service charges, volumetric, excess electricity credits, and storage capacity credits, which may be increased or decreased during a utility's general rate case. The rate shall offer optional time of use and time of production options, for which a customer-generator may elect to participate. The rate must consider positive and measurable known and measurable determinable by the utility:
  - Value of the avoided cost of fuel and hedge value used by the utility to meet electric loads and transmission and distribution losses.
  - Value of the utility's avoided generation, operations, and maintenance costs for all owned non-renewable generation facilities at peak load.
  - Value of avoided transmission and distribution costs or loss savings resulting from reduction of peak load.
  - Value of quantifiable environmental benefits, including but not limited, to the incremental costs of offsetting a unit of owned non-renewable generation, and avoided costs to comply with environmental regulations.

- If applicable, the value of avoided generating costs for any customer installed interconnected storage device or technology that can feed electricity to the grid.
- Any other quantifiable benefit as determined by the Commission by regulation.

NRS 704.775

- 1 - The billing period for net metering must be a monthly period.
- 2 - The net energy measurement must be calculated in the following manner:
  - a - The utility shall measure, in kilowatt-hours, the net electricity produced or consumed during the billing period, in accordance with normal metering practices.
  - b - If the electricity supplied by the utility exceeds the electricity generated by the customer-generator which is fed back to the utility during the billing period, the customer-generator must be billed for the net electricity supplied by the utility at the retail rate of electricity as determined in a general rate case.
  - c - If the electricity generated by the customer-generator which is fed back to the utility exceeds the electricity supplied by the utility during the billing period:
    - 1 - Neither the utility nor the customer-generator is entitled to compensation for the electricity provided to the other during the billing period.
    - 2 - The excess electricity which is fed back to the utility during the billing period is carried forward to the next billing period as an addition to the kilowatt-hours generated by the customer-generator in that billing period. If the customer-generator is billed for electricity pursuant to a time-of-use rate schedule, the excess electricity carried forward must be added to the same time-of-use period as the time-of-use period in which it was generated unless the subsequent billing period lacks a corresponding time-of-use period. In that case, the excess electricity carried forward must be apportioned evenly among the available time-of-use periods.
      - NEW I - Excess electricity which is fed back to the utility during the billing period shall be credited at the rate described in [NEW SECTION] as determined in a general rate case.
    - 3 - Excess electricity may be carried forward to subsequent billing periods indefinitely, but a customer-generator is not entitled to receive compensation for any excess electricity that remains if:
      - I - The net metering system ceases to operate or is disconnected from the utility's transmission and distribution facilities;
      - II - The customer-generator ceases to be a customer of the utility at the premises served by the net metering system; or
      - III - The customer-generator transfers the net metering system to another person.

- ~~The value of the excess electricity must not be used to reduce any other fee or charge imposed by the utility.~~
- 4 - The value of the excess electricity may be used to reduce any other fee or charge imposed by the utility.

- 3 - If the cost of purchasing and installing a net metering system was paid for:
  - a - In whole or in part by a utility, the electricity generated by the net metering system shall be deemed to be electricity that the utility generated or acquired from a renewable energy system for the purposes of complying with its portfolio standard pursuant to NRS 704.7801 to 704.7828, inclusive.
  - b - Entirely by a customer-generator, the Commission shall issue to the customer-generator portfolio energy credits for the following purposes:
    - NEW 1 - For use within the system of portfolio energy credits adopted by the Commission pursuant to NRS 704.7821 and704.78213 equal to the electricity generated by the net metering system.
    - NEW 2 - At the time of initial interconnection, the customer generator may elect to automatically transfer their portfolio energy credits for electricity generated and be deemed electricity that the utility generated or acquired from a renewable energy system for the purposes of complying with its portfolio standard pursuant to NRS 704.7801 to 704.7828, inclusive.

2. **Establish polices which support energy storage.**
   Proposals:
   a. A recommendation that the 2017 Legislature consider a bill to update NRS Chapter 704 to include energy storage procurement targets for the state's utilities and other energy providers so that Nevada may unlock opportunities to utilize cost-effective energy storage on the electric grid. The bill would include targets for storage interconnected to each point of the grid – customer-connected, distribution-connected, and transmission-connected. Further, storage procurement targets should increase over time with targets set for 2019, 2021, and 2023, as to ensure that lessons learned from earlier procurement inform subsequent procurement.
   Background: Energy storage on the electric grid can increase grid efficiency, integrate renewable energy, reduce greenhouse gas emissions, offset the need for costly grid investments, improve grid resiliency, and increase energy independence. However, significant barriers to deploying energy storage exist in the many legacy grid procedures and tariffs that do not contemplate the use of energy storage on the electric grid. Specifically, utility planning, valuation, operations, procurement, interconnection, and rate design do not systematically incorporate energy storage. The best way to update grid processes and unlock opportunities for the state to benefit from storage is to learn by doing. By demonstrating a commitment to utilize energy storage, storage procurement targets will shape grid processes that fully incorporate energy storage and thus will allow the state to uncover where storage is a more cost-effective investment than traditional grid infrastructure.

Storage procurement targets for utilities should be set for each point of the grid – transmission, distribution, and customer-located – to ensure that utility processes impacting each point of the grid are updated to include storage. Procurement targets should increase over time to allow for lessons learned to inform future procurement. For example, a small amount of storage procurement should occur by 2019, a larger amount by 2021, and a substantial amount by 2023. The Public Utilities Commission should oversee the utilities' storage procurement activities, including reviewing biannual compliance reports to be filed by utilities on their progress towards achieving their storage procurement targets.

No additional costs would be incurred by Nevadans as a result of the state adopting storage procurement targets. The bill should propose the procurement of *cost-effective* energy storage so that there is only upside for Nevadans. If, after thorough investigation including a request for offers, utilities cannot find cost-effective opportunities for energy storage on the grid, then utilities could defer their storage procurement.

b. A recommendation that the 2017 Legislature consider a bill that would define "energy storage" technologies in NRS, and require that energy storage be considered in utilities' generation, transmission, and distribution planning processes.

Background: There remains uncertainty in what exactly constitutes energy storage technologies and developments. Following are some sample definitions used in legislation from other States:

Oregon

> (2) "Energy storage system" means a technology that is capable of retaining energy, storing the energy for a period of time and delivering the energy after storage.

California

> (1) "Energy storage system" means commercially available technology that is capable of absorbing energy, storing it for a period of time, and thereafter dispatching the energy. An "energy storage system" may have any of the characteristics in paragraph (2), shall accomplish one of the purposes in paragraph (3), and shall meet at least one of the characteristics in paragraph (4).
>
> (2) An "energy storage system" may have any of the following characteristics:
>
> > (A) Be either centralized or distributed.
> >
> > (B) Be either owned by a loadserving entity or local publicly owned electric utility, a customer of a loadserving entity or local publicly owned electric utility, or a third party, or is jointly owned by two or more of the above.
>
> (3) An "energy storage system" shall be cost effective and either reduce emissions of greenhouse gases, reduce demand for peak electrical generation, defer or substitute for an investment in generation, transmission, or distribution assets, or improve the reliable operation of the electrical transmission or distribution grid.
>
> (4) An "energy storage system" shall do one or more of the following:
>
> > (A) Use mechanical, chemical, or thermal processes to store energy that was generated at one time for use at a later time.
> >
> > (B) Store thermal energy for direct use for heating or cooling at a later time in a manner that avoids the need to use electricity at that later time.
> >
> > (C) Use mechanical, chemical, or thermal processes to store energy generated from renewable resources for use at a later time.
> >
> > (D) Use mechanical, chemical, or thermal processes to store energy generated from mechanical processes that would otherwise be wasted for delivery at a later time.

Massachusetts

“Energy storage system”, a commercially available technology that is capable of absorbing energy, storing it for a period of time and thereafter dispatching the energy and which may be owned by an electric distribution company; provided, however, that an energy storage system shall: (i) reduce the emission of greenhouse gases; (ii) reduce demand for peak electrical generation; (iii) defer or substitute for an investment in generation, transmission or distribution assets; or (iv) improve the reliable operation of the electrical transmission or distribution grid; and provided further, that an energy storage system shall: (1) use mechanical, chemical or thermal processes to store energy that was generated for use at a later time; (2) store thermal energy for direct heating or cooling use at a later time in a manner that avoids the need to use electricity at that later time; (3) use mechanical, chemical or thermal processes to store energy generated from renewable resources for use at a later time; or (4) use mechanical, chemical or thermal processes to capture or harness waste electricity and to store the waste electricity generated from mechanical processes for delivery at a later time.