

## Hartman, Brice C (ATG)

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**From:** C B <cbib1@yahoo.com>  
**Sent:** Thursday, January 19, 2023 9:16 AM  
**To:** comments@utc.wa.gov  
**Cc:** ceip@pse.com; ATG WWW E-mail Public Counsel  
**Subject:** PSE Clean Energy Docket UE-210795

[EXTERNAL]

### PUBLIC COMMENT SUBMISSION ON PUGET SOUND ENERGY'S CLEAN ENERGY IMPLEMENTATION PLAN DATED DECEMBER 17, 2021

UTC FILING UE-210795

I am not a climate specialist nor am I an energy specialist. I am just an ordinary concerned citizen trying to understand, as best I can, the climate change hysteria that is gripping our politics and our energy industry, because the decisions being made today will have an enormous impact on all our lives. I believe there is no reason to be concerned about changes in our climate because we humans really can't affect that much by what we do or don't do. Climate change is real today, as it always has been historically, but the latest attempts to blame it on human activity are a power play, a way to control our lives and suppress our freedoms. There is much research by very qualified professionals to say that the science of climate change is a long ways from being settled. However there is intense political pressure to silence anyone who dares to challenge or deny that climate change is due to human activity.

Our climate is in constant flux and change. God designed it that way. Carbon in the form of CO<sub>2</sub> is an integral and critical part of our ecosystem. Without it, there would be no plants and we could not survive. Science tells us that as CO<sub>2</sub> increases, plant growth also increases and vice versa. So our ecosystem is marvelously designed to be self-balancing and self-sustaining.

50 years ago, the doomsayers were predicting another ice age and the end of the world in less than a generation. When the planet started to warm up within a few decades, the warnings suddenly changed to a threat of "global warming" and once again the end of the world. When, less than a decade ago, the climate showed a cooling trend, the generic term "climate change" was coined and remains the latest fashion today. Our climate is constantly in flux, alternating from warming to cooling and back again. That is the way it has been for all of known history. We can't change the nature of our climate, or for that matter, control it. I repeat, it is designed to operate in this manner.

Big-government and over-regulation are not the way to deal with the issues of climate change. Given truthful information and access to resources, each person should be able to choose the energy source they prefer and that best suits their needs. Capitalism and the American way of life will ensure they make the right decision. History proves this.

People only need access to the facts and the freedom to make informed choices, and they will generally make the right decision. I love this about America. That's probably why millions of people around the world are dreaming about coming here, legally or illegally.

## COMMENTS ON PSE'S CLEAN ENERGY PLAN

### 1. Date of Plan

This is stated to be a 4-year plan, and we are now past 1 year into the plan timeframe. Is this a hearing to approve the plan, or is the public hearing a report on the progress that has been achieved along the road to implementing the plan? Does PSE require UTC approval to fully implement the plan or is PSE simply updating the UTC on the plan's progress? Is UTC an approval agency or a monitoring agency?

### 2. Plan Progress

PSE sets a goal of achieving 63% “Clean” electricity by the end of 2025. The achieved percentage at 12/17/21 was stated to be 35%. What is the achieved percentage as at 12/31/22? Has any progress been made in implementation of the plan?

A major component, and a stated objective, of the plan is elimination of coal as a source of electricity by the end of 2025. Is it realistic to eliminate a major source of our electricity before the replacement sources are established and proven economic and reliable? That does not seem to me to be a very smart way to deal with this perceived problem of so-called “dirty?” energy. The root of the coal question is in the computer-generated models that predict that carbon is our greatest problem and will ultimately destroy our planet unless we do all we can to reduce or eliminate its use in our energy production as well as our everyday living – elimination of all fossil fuels as a source of energy.

### 3. Proposed wind and solar generation

I traveled by automobile fairly extensively through central Germany in 2016 and 2018. I saw first-hand the eyesores created by “utility-scale” solar and wind farm installations. I am definitely not in favor of creating the same kind of installations in this country. I believe they are not practical and, as Germany has experienced, not reliable enough to justify dependence on these “renewable” sources. In their attempt to solve a perceived problem, they generate a host of other problems we can't understand or predict.

#### 4. DER's

Wind, solar, battery storage, Biomass and other forms of DER's need to be assessed in terms of long-term reliability and economic viability. Just forging ahead with this plan in the name of carbon footprint reduction without weighing reliability and economic factors seems to me to be shooting ourselves in the foot. Mankind will not benefit from converting agricultural land to energy production, because we will be reducing already limited food production in the process. Is it better to experience some degree of climate fluctuation, which has always been our experience, or to die of starvation because our agricultural assets and resources are being converted to so-called “clean energy” applications.

#### 5. Energy efficiency

Improving energy efficiency is a very worthwhile goal as long as the efficiency is cost-effective. All sources of energy need to be critically evaluated for their long-term costs and benefits.

#### 6. Benefit distribution

I definitely do not understand why equitability and inclusiveness are components of this plan. It sounds very woke to me, like special recognition or benefits need to be afforded to certain groups to more equitably allocate “limited” resources. The focus should not be on creating special classes, but on allocating our limited energy resources equally and fairly to everyone, regardless of all the politically correct classes our politicians are trying to separate us into. The focus should be on providing as much economic and reliable energy that PSE can generate, without politically tying their hands and intentionally limiting their access to possible energy sources. Our capitalist, free-enterprise system will eventually lead us to the best results, without government interference.

There can never be a carbon-free future for the energy industry. We must have carbon to survive on this planet. God, who alone is in control, designed our climate system to operate in this manner. Carbon is fundamental to human survival.

I appreciate you taking the time to consider my comments.



## Hartman, Brice C (ATG)

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**From:** Catherine Benysek <bcat@pioneernet.net>  
**Sent:** Wednesday, January 11, 2023 2:20 PM  
**To:** ATG WWW E-mail Public Counsel  
**Subject:** Puget Sound Energy's Clean Energy Implementation Plan

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

[EXTERNAL]

Sent from [Mail](#) for Windows

GREEN ENERGY KILLS! : birds, fish, the fishing industry, the folks in the cold who can't afford energy bill, truckers, farming, folks who can't afford food, landfills choked with windmill parts that cannot be recycled.....

GREEN ENERGY HELPS SUPPORT CHINA!!!

## Hartman, Brice C (ATG)

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**From:** ken marzocco <ken.marzocco@gmail.com>  
**Sent:** Tuesday, January 17, 2023 11:21 AM  
**To:** comments@utc.wa.gov; ATG WWW E-mail Public Counsel  
**Subject:** Docket UE-210795

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

[EXTERNAL]

### RE: Docket UE-210795

I am writing regarding the Hearing for PSE's Clean Air Implementation Plan. With a degree in Mechanical Engineering and many years of experience working in the energy sector, I believe all proposals need to be both technically sound and in the best interest of customers. Several initiatives proposed by PSE seem to fail in one or both above-mentioned criteria, for example:

#### **Expansion of residential/distributed solar generation:**

1. It is well documented that the Pacific Northwest (PNW) is the very worst location in the USA for solar generation. The "sun index" in WA is 0.67 vs 1.19 in NV.
2. Solar installations located in the southwest can generate roughly 60-80% more energy compared with those in the PNW. In addition, markets in the southwest have peak electrical demand in the summer versus winter in the PNW when solar generation here is minimal (~1/10 of summer generation).
3. In CA, the flawed economics associated with net metering for solar generation results in more than a billion dollars per year in additional costs to the utility's customers. To remedy this injustice, CA very recently changed the compensation model away from net metering and instead will compensate solar generation based on the market price of electricity.
4. The estimated installed cost of a 5 kW residential solar system is \$15,750. Using an interest rate of 6% over a 20-year period the annual cost would be \$1356. In the PNW, a 5 kW system would generate an estimated 5000 kWh per year. The wholesale cost of electricity in the PNW averages approximately \$0.04/kWh, therefore the solar installation would generate ~\$200 of electricity per annum. The annual loss would therefore be \$1156/year ignoring maintenance expenses, costs for PSE to connect the system to the grid, PSE overhead as well as, performance degradation and eventual demolition/disposal of the solar panels. One could argue that the economics are improved due to various subsidies, but these costs are also ultimately borne by customers through other Utility charges and taxation.
5. PSE proposes to rent roofs from low-income families and install PSE owned solar facilities. The extra cost, for roof rental and administration, will only make the economics worse. Assuming PSE would pay \$300/year for a roof rental then the loss would be at least \$1436/year.
6. With WA real estate amongst the most expensive in the country, how many low income families actually own homes which have relatively new roofs that will last the life of the solar system?

In summary, PSE's proposal to help low-income families by renting roofs for solar generation will likely benefit PSE at great expense to their customers. The program would cost customers >\$5 for every \$1 that goes to a low-income family. Any charitable program should not cost PSE's Customers multiples more than the value received by the charitable recipients.

#### **Battery Storage:**

1. The cost of battery electricity storage is extremely expensive compared to using natural gas fired peaking units. In December 2022, The NREL (National Renewable Energy Laboratory) reported that Utility sized battery storage costs \$446/kWh or \$446,000/MWh. Therefore, a system designed to supply 60 MW for just 4 hours would cost \$107,040,000.

2. Batteries can supply electricity for a very short window after which they are useless until they are recharged. Alternatively, peaking units can run indefinitely. Relying on battery storage would place PSE's customers at risk of prolonged outages during winter storms resulting in lives lost and tremendous financial loss.
3. PSE proposes using the batteries for both emergency backup and peak shaving. These two uses should be evaluated separately since any energy used for peak shaving will not be available during unpredictable emergencies.
4. The manufacturing of Lithium batteries results in a large carbon footprint which can only be offset if green energy is available to charge the batteries.
5. PSE claims batteries would reduce emissions **if** they were charged using renewable electricity. The reality is that only 35% of the electricity is currently "clean" and there is little chance surplus clean power will be available during the life expectancy of the batteries.
6. Utility-scale battery storage technology is evolving. The NREL forecasts cost will drop by more than half in the next decade. Any investment at this time will be wasted.

Since any incremental electrical load must currently be met with natural gas or coal fired electric generation, PSE's plan would result in the combustion of hydrocarbons to charge the batteries in order to reduce the usage of hydrocarbon fired peakers. The net result would be a large capital expenditure and increased overall emissions. I believe this is an example of greenwashing.

In summary, I do not dispute the need to reduce emissions, but it appears that the proposed capital intensive changes will have minimal positive impacts other than benefiting the shareholders of PSE at the expense of its customers. As one alternative, PSE could invest in utility scale solar projects in the southwest where they would have a much better return. This would benefit PSE's customers by helping reduce mid-Columbia spot prices in the summer. As a better option, PSE could negotiate a long-term purchase agreement with BC Hydro (the utility north of the WA border). BC Hydro is a net exporter of green electricity, and they transmit large volumes through WA to CA. The supply of electricity from British Columbia is set to grow substantially once the Site C hydroelectric facility is commissioned. Site C is forecasted to generate 5100 GWh per year starting in 2025.

Climate Change is a global issue and employing strictly a local focus is ineffective while wasting the limited resources (money and minerals) available.

Ken Marzocco  
Bellingham, WA

## Hartman, Brice C (ATG)

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**From:** Energy Reports -- mail -- <energyresource2@pse.com>  
**Sent:** Tuesday, December 13, 2022 9:10 AM  
**To:** N R; comments@utc.wa.gov; ATG WWW E-mail Public Counsel  
**Subject:** RE: Ref: Docket UE-210795. UTC. Public Hearing Jan 24th 2023. Re: Hi NICOLA ROBINSON, see how you can save energy this winter.

[EXTERNAL]

Hello Nicola,  
Thank you for taking the time to share your questions, concerns and feedback with us. We apologize for any confusion with your original email, will ensure that you continue to receive the home energy reports going forward.

As to your additional questions, we have forwarded them to Energize Eastside for review, response and further internal routing as necessary. If you have further questions about the Energize Eastside project please contact [energizeeastside@pse.com](mailto:energizeeastside@pse.com).

For information about energy efficiency, and billing assistance programs please visit: [pse.com/lower](http://pse.com/lower)

Sincerely,  
Chris Stapleton  
Puget Sound Energy - Customer Energy Management

-----Original Message-----

**From:** N R <bizbuzz135@outlook.com>  
**Sent:** Monday, December 12, 2022 11:46 AM  
**To:** Energy Reports -- mail -- <energyresource2@pse.com>; comments@utc.wa.gov; utility@atg.wa.gov  
**Subject:** Ref: Docket UE-210795. UTC. Public Hearing Jan 24th 2023. Re: Hi NICOLA ROBINSON, see how you can save energy this winter.  
**Importance:** High

CAUTION - EXTERNAL EMAIL Phishing? Click the PhishAlarm "Report Phish" button.

Hello Elisa S. Filoni. Program Implementer – Direct To Consumer. PSE.

Attn: Utilities and Transportation Commission. Docket UE-210795. UTC.  
Attn: Public Council Unit of the Washington Office of the Attorney General.

Thank you for your reply Elisa, and good day for all those who are copied on this email. The UTC, and the Public Council Unit of the Attorney Generals Office.

I hope all is well with you and yours?

Firstly I would like to ask a question Elisa: Did I ask to be removed from the PSE Home Energy Report?

I did not.

I simply wanted to make a point, which it seems was not heard?

I forgot to add an important and critical point in my first email, that the result of the on-line energy report I received from PSE that was congratulatory, and showed my energy consumption was below the average for similar homes, was ill-informed and not aware of the fact that many customers like myself, are doing well with energy consumption according to PSE monitoring, because they are not turning the heat on in their homes, except for some rudimentary source as I am, which is a single oil filled convection radiator - hardly adequate for 840 sq feet.

At the same time, PSE, a private publicly traded company is reaping record profits on the stock exchange - 8% in 2022, and despite the hardship that many are feeling, PSE is asking for exorbitant increases in the cost of gas and electric to consumers.

I can only interpret PSE's drive for more profits through ever increasing rates, as the absence of any knowledge regarding the reality on the ground of PSE customers, and therefore a lack of concern or interest regarding this reality.

An argument might be made that PSE has to be reimbursed for any new or altered/upgraded infrastructure.

I would ask why PSE can't use it's profits gained on our backs, to pay for any alterations to the infrastructure, instead of paying it's stockholders and company officials?

QUOTE: Ref: 'Energize Eastside.'

Regular upgrades or additions to the electric infrastructure are shared by all of PSE's 1.1 million customers and paid for over time. We don't yet know the total cost of the project, but the current estimate is around \$250 million. Customers will not see any changes in their monthly bill to pay for this project.

<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fenergizeeastside.com%2Ffaqs&data=05%7C01%7Cutility%40atg.wa.gov%7Cf7fa14c22eb3489e6de908dadd2ce85a%7C2cc5baaf3b9742c9bcb8392cad34af3f%7C0%7C1%7C638065482218831515%7CUnknown%7CTWFpbGZsb3d8eyJWljoimc4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Iik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=yEgMITZBgcnK3moXnEBckj4q%2B5ZaZbshXEGbafu1bjU%3D&reserved=0>

EMAIL attached to the above web-site:  
energizeeastside@pse.com

QUOTE:

After three years of research and findings by multiple industry experts, CENSE has concluded that Energize Eastside is a project with no purpose other than increasing revenues for PSE's Australian and Canadian owners.

Energize Eastside is not necessary to serve growth. Total electricity consumption has been declining for years, despite population growth, and PSE's transmission line project will not improve electrical reliability by any practical measure.

[https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Furldefense.proofpoint.com%2Fv%2Furl%3Fu%3Dhttps-3A\\_\\_cense.org\\_wp-2Dcontent\\_uploads\\_2017\\_04\\_Energize-5FEastside-5FWrong-5Ffor-5FCommunities-5F170409.pdf%26d%3DDwIGaQ%26c%3D2qU16x-MyLBBsjp4ZR92ow%26r%3DtYkCTaKo\\_ART\\_9HUtePCX7d4ojq\\_-KugoSnon10JY9g%26m%3DjO84OZdGNClrgsTpRmIGGm7Cx7AXyBY1gAYA6JXYuU\\_Nj\\_JtaPny3Qgkd7uCUUwH%26s%3DPvx0hqqO9wGMVJr8hTfvWThKq4QC-WyVmgUOqrsVA-Q%26e%3D&data=05%7C01%7Cutility%40atg.wa.gov%7Cf7fa14c22eb3489e6de908dadd2ce85a%7C2cc5baaf3b9742c9bcb8392cad34af3f%7C0%7C1%7C638065482218831515%7CUnknown%7CTWFpbGZsb3d8eyJWljoimc4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Iik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=3FggOSRE7AyNVqkFXHJ3XoM10isK6vN2fFqP4PeisQc%3D&reserved=0](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Furldefense.proofpoint.com%2Fv%2Furl%3Fu%3Dhttps-3A__cense.org_wp-2Dcontent_uploads_2017_04_Energize-5FEastside-5FWrong-5Ffor-5FCommunities-5F170409.pdf%26d%3DDwIGaQ%26c%3D2qU16x-MyLBBsjp4ZR92ow%26r%3DtYkCTaKo_ART_9HUtePCX7d4ojq_-KugoSnon10JY9g%26m%3DjO84OZdGNClrgsTpRmIGGm7Cx7AXyBY1gAYA6JXYuU_Nj_JtaPny3Qgkd7uCUUwH%26s%3DPvx0hqqO9wGMVJr8hTfvWThKq4QC-WyVmgUOqrsVA-Q%26e%3D&data=05%7C01%7Cutility%40atg.wa.gov%7Cf7fa14c22eb3489e6de908dadd2ce85a%7C2cc5baaf3b9742c9bcb8392cad34af3f%7C0%7C1%7C638065482218831515%7CUnknown%7CTWFpbGZsb3d8eyJWljoimc4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Iik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=3FggOSRE7AyNVqkFXHJ3XoM10isK6vN2fFqP4PeisQc%3D&reserved=0)

It is interesting but not surprising that the main gist of my prior message was totally ignored, as was the research offered to PSE by CENSE, referenced above, and other reputable scientific organizations.

I understand, Elisa that you personally may not be informed of some of the contents of this email.  
I don't hold you personally responsible, but if any of this information is new to you, I always say knowledge is power.

Thank you for your interest in this issue.

Nicola Robinson.  
Renton.

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From: Energy Reports -- mail -- <energyresource2@pse.com>  
Sent: Monday, December 12, 2022 8:30 AM  
To: N R  
Subject: RE: Hi NICOLA ROBINSON, see how you can save energy this winter.

Hello Nicole, I appreciate the time you took to share your concerns with us and regret that your experience with Puget Sound Energy's Home Energy Report has been less than satisfactory. It is our sincere desire to provide excellent customer service. When we receive feedback from customers like you, we are then able to address such issues.

The Home Energy report is designed to provide customers with information about their energy use and is by no means trying to dictate how to use your home's energy. This report is simply a tool to help customers better understand how much energy is being used and provide useful tips on how to make homes more energy-efficient.

Based on your email, I have removed your account from receiving these notifications. Please note that it can take 1-2 notification cycles for the reports to drop off so please disregard any notifications you may receive during this update.

Thank you!

Elisa S. Filoni  
Program Implementer – Direct To Consumer Puget Sound Energy  
425-424-6509 -tel  
19900 North Creek Parkway BOT-01H  
Bothell, WA 98011

-----Original Message-----

From: N R <bizbuzz135@outlook.com>  
Sent: Friday, December 9, 2022 3:57 PM  
To: Energy Reports -- mail -- <energyresource2@pse.com>  
Subject: Re: Hi NICOLA ROBINSON, see how you can save energy this winter.  
Importance: High

CAUTION - EXTERNAL EMAIL Phishing? Click the PhishAlarm "Report Phish" button.

I have an idea.  
Why doesn't PSE reduce their charges?  
Instead of making us maintain your 8% profits that you have achieved over the last year by increasing charges?  
I know your company cares more for its stockholders than for us the customers.  
I don't believe your company's philosophy is to help customers.

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From: pse@email.opower.com <pse@email.opower.com> on behalf of Puget Sound Energy <pse@email.opower.com>  
Sent: Friday, December 9, 2022 12:09 PM



Your dishwasher uses a lot of energy, especially for heating water. To cut down on energy use, run only full loads and let your dishes air dry.

Save up to \$10 per year

[Use motion detectors for your outdoor lights] [Use motion detectors for your outdoor lights] Use motion detectors for your outdoor lights Because outdoor lights are higher wattage, they can waste more electricity than indoor lights. Install a motion sensor to reduce an outdoor light's energy use without compromising security or style.

Save up to \$15 per year

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## Hartman, Brice C (ATG)

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**Sent:** Wednesday, December 14, 2022 8:18 PM  
**To:** ATG WWW E-mail Public Counsel  
**Cc:** Philip Nusz  
**Subject:** PH Nusz - Comments - Docket UE-210795 - PSE's CEIP  
**Attachments:** EML-ENERGY-PSE-CEIP-PCU-AGO---221214.docx

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Public Council Unit,  
Attorney General's Office  
800 Fifth Ave, Suite 2000  
Seattle, Washington 98104

RE: PH Nusz - Comments - Docket UE-210795 - PSE's CEIP -  
Puget Sound Energy's, Clean Energy Implementation Plan:  
Council Members:

I have read PSE's, CEIP summary, which proposes an increase in so called "Clean Electricity" from about 35% now, end of 2022, to 63%, almost double by the end of 2025.

This seems like an enormous change, in a short three-year period; if it is to be done reliably, and cost effectively in terms of the customer's cost, and the federal and Washington state subsidies (taxpayer's costs).

It's ironical, in the last decade or so, while we have more technology and electrical infrastructure than ever before, our electrical grids in the state of Washington, and the USA in general, seem to be more fragile.

Following are some issues which concern me, and suggestions I have for consideration as we transition to clean and sustainable energy.

1. Comments and Suggestions:

- Prepare for Unexpected Clean Energy Consequences: Following are some examples where clean energy, without adequate backup has caused serious problems.
  - a. Heat - California - 2020, 2022: September 2020, high temperatures caused numerous rolling blackouts. September 09-11, 2022, numerous energy saving Flex-Alerts were issued, and EV users were asked to refrain from charging their vehicles in the afternoon and evenings.
  - b. Cold - Texas - February 2021: Massive outages for days due to cold weather and freezing rain.
  - c. Wind - Germany - 1-st Half of 2021: Coal generated power exceeded wind power, due to the lack of wind, January to March.

- d. Drought - Italy - January-May 2022: Hydroelectric power typically produces +40% of their electricity. Due to extended drought, it was reduced by 40%.
- Develop a Practical, Not an Ideological Clean Energy Program:
  - Let Clean Energy Mature at its Natural Pace: New technologies generally progress in the most economical, most reliable, and most effective manner when left to mature on their own; in a manner which conforms to the real-world conditions. On the contrary, forcing technology typically commits resources to equipment and systems which are costly, inefficient, unreliable, and will out of necessity become obsolete much sooner than they would have otherwise.
  - Diversity - Increase Clean and Conventional Power Supplies: By diversifying and increasing both, while beefing up the transmission system at the same time, the grid will end up being the most robust in the short and long term. Then, as time goes by, the least efficient and most costly sources can be replaced, as clean and renewable energy technologies advance. This seems to be the approach China and India are taking.
2. Adding Electrical Loads: Washington and the USA are promoting increased electrical energy usage.
- Electric Vehicles (EV): Each new EV, driven 10,000-miles per year is equivalent to adding one-quarter of a typical single-family home to the grid, based on the Writer's calculations.
  - Heat Pumps as Gas Fired Furnace Replacements: They becomes less efficient as the temperature drops. Some sources comment that conventional units are marginal below 40-DF, when they are needed the most.
  - Bringing Industry Back to America: While industry is good for our country, it takes energy, especially heavy industry like chemical and metal production.
  - Limiting Gas Hook-Ups in Particular Areas: If instituted, the homes and businesses will use much more electrical power than they would have otherwise, with gas fired furnaces, water heaters, fire fireplaces, ranges, and other commercial equipment.
3. Energy Sources:
- Renewables: Because clean, renewable sources such as wind and solar are generally the first to be used, whenever a new home, EV, or electrical appliance is added to the grid, the extra power has to be supplied by some conventional fossil fueled or nuclear power plant.
  - Marginal: Generally, all of the grids in the USA have become marginal; because of the added loads, and the shut-down of lower efficiency plants, and the so-call dirty coal fired plants. Consequently, the grids are having a difficult time providing power without blackouts, or pleads for cutbacks by customers during severe hot or cold weather periods.
  - Dilemma - New Electrical Loads Require Additional Conventional Power: Essentially all of the new loads must be provided, or backed up with conventional power.

Assuming all the additional loads could be supplied by new renewables,  
about the same amount of backup conventional power will have to  
be added to the grid, to cover those times when the sun doesn't  
shine, and/or the wind doesn't blow.

This dilemma will persist, until revolutionary forms of energy storage,  
and/or production are developed.

Sincerely,

Philip H. Nusz

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(Copy of this letter.)