



LOS ALAMOS

Carbon Free Power Project (CFPP)

August 10, 2020, 7:46 AM

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Carbon Free Power Project (CFPP)

Should Los Alamos continue on to the next phase of the Carbon Free Power Project (CFPP) - a nuclear electric generation facility proposed to be constructed at Idaho National Laboratory that uses small modular reactor (SMR) technology?

Summary Of Statements

As of August 10, 2020, 7:46 AM, this forum had:		Topic Start
Attendees:	134	July 24, 2020, 5:53 PM
Statements:	47	
Hours of Public Comment:	2.4	

Carbon Free Power Project (CFPP)

Should Los Alamos continue on to the next phase of the Carbon Free Power Project (CFPP) - a nuclear electric generation facility proposed to be constructed at Idaho National Laboratory that uses small modular reactor (SMR) technology?

Individual Statements

Aaron Walker

inside WHITE ROCK

July 25, 2020, 2:04 PM

Nuclear power is the only option we have right now that provides reliable, scalable power that is both carbon free and relatively reasonable in cost. I spent 7.5 years in the nuclear power industry in the US Navy and there are significant benefits to nuclear power. This is the only way we will achieve the goal of being carbon neutral while keeping utility rates reasonable for residents. Keep moving forward.

4 Supporters

Name not available

July 26, 2020, 7:21 AM

I am in favor of the CFPP project

Name not available

July 26, 2020, 7:27 AM

I am in favor of this project

Arthur Dillon

inside NORTH COMMUNITY

July 26, 2020, 7:38 AM

Los Alamos County Utilities must seek energy sources with:

1. Maximum Reliability, and
2. Minimum Cost.

Period.

To do anything else is clearly purely political in nature, and must be determined as exceeding the responsibilities and authority of Los Alamos County Utilities.

If the Los Alamos County Council has assigned responsibilities and authority to Los Alamos County Utilities beyond maximum reliability and minimum cost then the Los Alamos County Council is seizing power and

authority it does not have.

1 Supporter

James Kuropatwinski

inside NORTH MESA

July 26, 2020, 7:47 AM

The technical and fiscal benefits of electricity generated from nuclear technology is readily apparent to us. A vote of "yes" for this initiative is a vote for a small local community supporting small local capability. And as these days of COVID have shown us, small local initiatives is the "new normal".

2 Supporters

Richard Triplett Jr.

inside WESTERN

July 26, 2020, 7:51 AM

I choose to believe scientists when they say "small modular reactor (SMR) that would take up 1% of the space of a conventional reactor.... and have simplified them, eliminating pumps, valves, and other moving parts while adding safeguards in a design they say would be virtually impervious to meltdown." We should continue to pursue sustainable energy.

2 Supporters

Daniel Varley

inside NORTH MESA

July 26, 2020, 8:09 AM

Simply, I'm in favor of continuing to explore this possibility.

2 Supporters

Andrea Gerber

inside ASPEN - WALNUT

July 26, 2020, 8:14 AM

Carbon Free Power Project (CFPP)

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Please continue to move forward to the next phase of CFPP / SMR.

4 Supporters

Name not available

July 26, 2020, 8:34 AM

No, I am not in favor of nuclear generation. We need to utilize solar and wind power for our electric needs.

Harry Flaugh

inside DENVER STEELS

July 26, 2020, 8:40 AM

We are in favor of investing in small modular nuclear reactor technology. This would be a good power source for times when neither solar nor wind power are available.

2 Supporters

Name not available

July 26, 2020, 8:56 AM

It is ridiculous to continue wasting taxpayer money on this. We have bigger problems in Los Alamos to deal with. Drop out immediately?

Neale Pickett

inside DENVER STEELS

July 26, 2020, 9:10 AM

Yes, LOL. This is as close as we're ever going to LANL using its own product.

1 Supporter

Name not available

July 26, 2020, 10:29 AM

Utility departments are not research labs. It should not be spending large amounts of money on unproven technologies. If it wants to get into generation vs buying

power from others how about enlarging the existing solar/battery facility? How about figuring how to have homeowners purchase a share in such a project. Therefore I am opposed to funding the CFPP.

Timothy Langworthy

inside BARRANCA MESA

July 26, 2020, 10:29 AM

Yes, emphatically.

1 Supporter

Name not available

July 26, 2020, 10:31 AM

Absolutely NOT !!

The county has no experience as an Investment Banker, Venture Capitalist, nor as a seer. Also, I don't believe that any of these are included in the county charter.

I think the county should concentrate on improving and providing venues for living the American Dream of equality, justice, and opportunity.

Chris Fischahs

inside NORTH COMMUNITY

July 26, 2020, 10:37 AM

While interesting and forward-thinking, the County should not be investing in NuScale and its SMR technology at this time. This is the definition of High Risk, low reward. There are so many obstacles to be overcome before this becomes legal for any thing other than experimental research, much less economical. Until then, this option is the proverbial money pit - something the County should not further "invest" in.

3 Supporters

Name not available

July 26, 2020, 11:49 AM

Carbon Free Power Project (CFPP)

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Vote No

Name not available

July 26, 2020, 11:51 AM

I have read the materials online and conclude that the County staff is executing appropriate due diligence on this project which is well aligned with DPU goals on reducing the carbon footprint in Los Alamos County.

I think that small modular nuclear reactors offer an important option for reliable power that complements renewable energy sources, such as wind and solar, that are intermittent. No power source is without issues. Although small modular nuclear reactors have the potential to provide safe and financially viable power, there will still be issues associated with nuclear waste and with the extraction of uranium for fuel. Nevertheless, other options from gas-fired power plants, which exacerbate long-term climate change issues and resource extraction issues, to battery storage options, which have cost, lifetime, materials, and resource extraction issues, are clearly not panaceas. Small modular nuclear reactors could be an important element in the US energy portfolio as it endeavors to reach an environmentally and financially sustainable approach for the remainder of the 21st century. This is reflected in the significant investment from the US Department of Energy, which is being leveraged by the approach proposed by DPU.

Given the history of Los Alamos in the development of nuclear power, it seems very appropriate for the County of Los Alamos to play a small but important role in furthering that development in partnership with another national laboratory. Also, the vision of a carbon-free community will, I think, be an asset for long-term economic development in Los Alamos and for recruiting and retention of critical talent needed by LANL and other local employers.

For the reasons stated above, I encourage approval for embarking on the next phase of the Carbon Free Power Project.

Name not available

July 26, 2020, 12:16 PM

I'm not opposed to nuclear energy and I would like to see us move to carbon free electrical energy but I would prefer that we invest in sources that are currently available. I'm not hot on this idea of buying into a developing source of power. What I don't understand, and maybe this is my fault, is what financial advantage does this give us? Is this explained somewhere?

Willard Wadt

inside NORTH MESA

July 26, 2020, 1:30 PM

Based on reading the online materials, I conclude that staff have exercised appropriate due diligence in evaluating the next phase of the Carbon Free Energy Project, which would be a significant step towards the DPU vision of reducing the carbon footprint in Los Alamos County.

Small modular nuclear reactors represent, I think, an important option to complement renewable sources in moving us toward a sustainable approach to energy production. All options have issues. Although small modular nuclear reactors potentially have significant advantages in safety and financial viability, there are still environmental and health issues of nuclear waste and extraction of uranium for fuel. On the other hand, alternatives such as gas-fired power plants and battery storage have issues ranging from resource extraction and exacerbating climate change to reliability, materials availability, and longevity. Small modular nuclear reactors have the potential to be an important addition to the US portfolio of options as it seeks a sustainable approach to energy production for the remainder of the 21st century. The significant investment from the US Department of Energy clearly reflects that potential and provides the County a significant opportunity for leverage.

Los Alamos has played an important role in the development of nuclear power. It seems very appropriate for the County to make a real contribution to the development and commercialization of small modular nuclear reactors in partnership with another national laboratory. Actions to become a community with carbon-free energy production should have long-term positive impacts on economic development including the recruitment and retention of talented employees to LANL and other local businesses.

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In accord with the above comments, I support action to embark on the next phase of the Carbon Free Energy Project.

2 Supporters

Richard Honsinger

inside EASTERN AREA
July 26, 2020, 3:38 PM

I support this effort

Name not available

July 26, 2020, 4:23 PM

I am for the CFPP to include the SMR.

Sandra Kurtz

outside Community Boundaries
July 27, 2020, 9:34 AM

Small modular reactors are simply old nuclear technology dressed up in smaller outfits. They are no less dangerous as radioactive venting is still required not to mention a possible meltdown or explosion releasing deadly radiation and evacuations. Neither are they cheaper than renewable energy per kilowatt nor do they help with reducing climate change impacts given the length of time required to build them. Health and low-cost electricity for ratepayers should be among the goals for quality of life in the future. Moving ahead with SMRs seems like throwing money down a sinkhole.

1 Supporter

Andrew Fraser

inside BARRANCA MESA
July 27, 2020, 10:50 AM

While I believe that the US should develop technology like this, the whole country should shoulder the risk. It is not an appropriate risk for a collection of small communities in Utah and New Mexico.

I've read the previous comments. Willard Wadt writes a well balanced argument in favor of continued participation. My brief statement in opposition is much like Chris Fischahs'. Aaron Walker's statement has credibility based on experience.

For the intermediate future, the best path for LA County is to pursue more conventional sources that reduce CO2 risk. The recent contract to buy renewable power backed by reciprocating CH4 generation seems ideal to me. Nuclear power is a bad match for varying power of wind and solar generation. Because of it's high capital cost, a nuclear plant should be run at full capacity once it's on line.

2 Supporters

Donald Machen

inside EASTERN AREA
July 27, 2020, 12:59 PM

I urge the LAC County Council to approve staying with UAMPS and the CFPP. This has been my advice to the CC since our recommendation accompanied the FER Committee report initially. Donald Machen, PE member of the former FER Committee

Robert Cunningham

inside BARRANCA MESA
July 27, 2020, 1:18 PM

This is a worthwhile investment for the County. Nuclear power is perhaps the safest and most reliable source of energy at scale.

Greg Kendall

inside DOWNTOWN RESIDENTIAL S
July 27, 2020, 1:48 PM

I think it is kinda insane for our little country to be shouldering responsibility for helping to developing this unproven technology. I would rather see Los Alamos develop more hydro and solar resources. I am not in favor of investing any county money in this project. There are

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too many risks and unknowns with this project.

2 Supporters

Name not available

July 27, 2020, 3:06 PM

Yes, I support going forward funding the SMR projects
If it can be coupled with a ban on windmills in los Alamos.

Name not available

July 27, 2020, 3:21 PM

Yes, the big power plants are not in our future, but a small one should be.

Galen Gisler

inside WESTERN

July 27, 2020, 5:12 PM

I am skeptical about the UAMPS proposal to supply Los Alamos County with electrical power generated at the Idaho National Laboratory with small modular reactors. Nuscale, the company currently on the hook to build the SMRs, has not yet fielded a single reactor, and it still has regulatory hurdles ahead of it that may take years to pass. This could add significantly to the cost of the power that is ultimately delivered to the County. A "Perspective" report published in the Proceedings of the National Academy of Sciences (Morgan, Abdulla, Ford, & Rath, PNAS July 10, 2018 115 (28) 7184-7189; first published July 2, 2018 <https://doi.org/10.1073/pnas.1804655115>) is also highly skeptical of the ability of SMRs to contribute to the nation's energy portfolio in the coming decades, although they do see possibilities for non-power industrial uses for them. Moreover, and most telling for me, we live in a region of the country that has abundant sunshine and wind. The County has already committed to UNIPER's plans to supply a substantial amount of electrical energy from solar and wind plants in our region, and far more can yet be done. Coupled with battery storage systems currently under development that face far less hurdles than SMRs, these renewable energy sources could supply all our needs for the foreseeable future. Under these circumstances, it makes no sense for Los Alamos County to contract with an

organization in Utah to bring us electrical power from an as-yet-unestablished source in Idaho when we have abundant energy resources in New Mexico.

3 Supporters

Andrew Hunt

inside ASPEN - WALNUT

July 27, 2020, 7:31 PM

Hello;

While I understand that nuclear has come a long way since Chernobyl it still demands a material which, once spent, is highly toxic to a human being and most other life forms. Why not use LANL's prodigious scientific capacity to pursue other things? I have heard of generators using earth's magnetic field or the spectacular power of the ocean tides. And the sun of course. It seems like a poor choice to continue with anything which is highly toxic and potentially explosive.

Thank you!

Andrew Hunt

1 Supporter

Jason Gochanour

inside DOWNTOWN RESIDENTIAL S

July 29, 2020, 7:22 PM

Absolutely! The sooner the better!

Name not available

August 2, 2020, 8:17 PM

I think we should stop throwing good money after bad. Time to cut our losses and remove ourselves from this deal. It's looking more and more unlikely that this plant will happen, and, in the meantime, we're missing out on other opportunities for clean power, notably wind and solar. I think we should look to Taos for a model--they're getting clean, cheap energy right now. Let's see how they're doing it and look to what we can do.

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William Mead

inside BARRANCA MESA
August 3, 2020, 12:09 PM

I support modernizing and expanding nuclear electricity generation IF AND ONLY IF realistic waste disposal methods and costs are included in the overall planning and design.

Richard Nebel

inside NORTH MESA
August 3, 2020, 3:10 PM

I have a Phd in Nuclear Engineering and I am very skeptical about this project. I'm not worried about the safety or the nuclear waste, but I am worried about the cost.

One of our associates at Tibbar Plasma Technologies is Keith Moser, who used to be the head of innovation at Exelon Corporation (the largest nuclear utility in the US). Several years back Exelon expanded their nuclear generating capabilities by buying up operating reactors for 5 cents to 10 cents on the dollar of their original costs. They no longer have capital costs on these plants, but rather only operating costs.

This approach worked well for several years, but over the past 3 years the revenue from their generating facilities has dropped from \$2,000,000,000/year to about \$300,000,000/year. They have been talking about closing both the Clinton power plant and the Quad-Cities power plant. Both natural gas and wind power are eating up their backside on generating costs. On windy days, Exelon is selling power at a loss.

If Exelon can't make money when all they have is operating costs, how is NuScale going to do that when they have capital costs to pay off as well? Furthermore, if you have multiple reactors you are probably going to need multiple operating crews. That will proportionately increase your operating costs. On top of that, this is a first-of-a-kind facility. You aren't going to be able to take advantage of cost reductions from large volumes of reactors. Finally, to my knowledge there hasn't been a single nuclear power facility that has come in on time and on budget since the early 1970s. I think this project is going to be a mess. Let someone else take the risk, not our community.

1 Supporter

William Mead

inside BARRANCA MESA
August 4, 2020, 9:34 AM

I attended the Aug. 3 town hall and was very disappointed with what I learned. Here are the factors that lead me to oppose carrying the project forward:

- No answer to the question of nuclear waste handling and disposal (I'll revise this if new information becomes available)
- Reactor design still being revised
- LA County would be paying RD&T costs
- Not a single nuclear-fueled test of existing design
- Engineering company has zero installation experience
- Cost estimates require 100% subscription; current level is 30% and no specific additional subscribers are known
- Nuclear power has a long history of cost overruns

This project appears to be highly speculative and I consider it unwise to proceed to the next phase.

1 Supporter

Norman Schroeder

inside WESTERN
August 7, 2020, 5:12 PM

Norman Schroeder

I support the continuation to the next phase of this project.

Kurt Hamman

outside Community Boundaries
August 8, 2020, 11:26 AM

Full disclosure: I am not a resident of Los Alamos County (LAC). I am a resident of Idaho Falls, Idaho and an Idaho Falls Power (UAMPS SMR project Participant) ratepayer.

Some readers may ask, "Why is this Hamman guy sticking his nose in our business?" Well, a close reading of the CFPP contract reveals that we (CFPP Participants) are in this project together - decisions made by the Idaho Falls City Council could impact LAC ratepayers, likewise decisions made by LAC could impact Idaho Falls ratepayers.

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Let me provide two examples from the City of Idaho Falls 2018 Power Sales Contract:

(1) "Step-up obligation, non-defaulting Participants can be required to take a portion of a defaulting Participant's Entitlement Share, subject to a maximum increase in the Entitlement Share over the term of the PSCs of 25%."

(2) "Certain decisions of the PMC are required to be made by a Super-Majority Vote (75% by number and Entitlement Share)."

<https://tinyurl.com/yb5t7yok> (cf. pdf pages 80, 81)

Noteworthy is that of the 36 municipalities participating in the SMR project, 27 municipalities are located in Utah. A prudent investor (i.e., municipality) would pay close attention to Utah dialogue. For example:

"Utah Taxpayers Association calls on cities to bail out of nuclear power project."
<https://tinyurl.com/y2q5jktb> (August 4, 2020)

Murray (Utah) City Council Meeting (August 4, 2020):
Link to discussion with Professor Ramana and Utah Taxpayers Association (UTA)
(Ramana: video time 0:05:46 and UTA video time 0:47:54)
<https://tinyurl.com/y6srujv3>

"It is commendable that UAMPS wants to build a project ..."
<https://lnkd.in/gYzqgfq> (July 7, 2020)

"Will the Idaho 1995 Settlement Agreement, limiting the storage of nuclear waste in the state, impact the project?"
<https://tinyurl.com/y4ogxt8v> (July 27, 2020)
<https://tinyurl.com/y33l83aw> (Settlement Agreement)

Finally,

"Yet it is incumbent on those in high places to make wise decisions, and it is reasonable and important that the public be correctly informed."
- H.G. Rickover, Father of the Nuclear Navy

<https://tinyurl.com/yclrnnp> (1970)

Name not available

August 8, 2020, 3:15 PM

I haven't formally looked into the cost and concerns about nuscale and regulatory issues. If those are a reasonable risk as other statements have suggested, I strongly support this project moving forward for a few of reasons, noting most of the concerns in other comments about radioactive 'venting' and waste are unfounded and easily debunked by the company. Idaho national lab has plenty of dry storage capacity for the small amount of waste this would produce.

My main reason to support this is all of the zero carbon efforts around the nation have no plan to get off of natural gas. They all propose primarily natural gas, with some solar and wind, to replace coal which reduces carbon emissions. However, there is no plan to remove the 50 percent natural gas power generation. This is a unique chance to support and be ahead of the curve on a form of baseload, near zero carbon power production.

Also, there is just too much irony, and maybe bad PR waiting to happen, with the fact that LANL provides several key software and high-performance computing resources for modeling and verifying reactor safety, and additionally climate modeling, but that county and those same computers are powered with millions of dollars of coal power (ill admit, I havent looked into how the lab and the county are separated in terms of the offsets from this proposed project). It seems reasonable to offset those with nuclear power. Finally, Los Alamos seems sufficiently wealthy, mostly driven from a federal government contract, to support this risk. I know the golf course repairs are much cheaper, but if I am paying for that with tax dollars, I should certainly help pay for this project.

Susan Barns

inside DENVER STEELS

August 8, 2020, 4:56 PM

In short, No, we need to exit this project now.

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We absolutely need to transition to carbon-free power as soon as possible. Unfortunately, the CFPP appears to be a slow, uncertain, and expensive way to get there. Low subscription, high price, novel technology, changing social/political/regulatory/energy landscapes, and uncertain completion date all put the success of this project in serious doubt. Tying our progress towards carbon neutrality to this project, when it's timeline keeps slipping further and further into the future, may mean that we pass up opportunities that arise sooner, cheaper and more feasibly.

I think our time, money and attention are better spent on pursuing 1) energy conservation and 2) existing, or near-term, renewable options. The Utilities Department and BPU just convened a Conservation Committee to suggest ways for LAC to reduce power use. We should put serious effort into following up on their ideas and other approaches to conserving energy (the cheapest and lowest-carbon approach).

The DPU should also put more effort into finding opportunities to expand our renewable energy sources, which are springing up at an accelerating pace, and can help us transition away from our remaining coal-fired generation contract at LRS. Although Staff have stated that "renewables plus storage are not yet feasible", they are being adopted widely by cities, states, islands and countries. A couple of weeks ago, the NM PRC approved 100% renewable energy+battery storage as the path forward for replacing coal-fired generation from the San Juan Generating Station. 650 MW of solar and 300 MW of battery storage are planned in several projects. And just this year, LAC approved a contract with Uniper Global Commodities to supply us with 15 MW of renewable, firm energy from NM solar and wind farms, for a mere \$36.67/MWh. This sort of pricing seems likely to be the future of energy, so why are we considering signing up to pay \$55/MWh for 40 years?

Please do not succumb to the "sunk cost fallacy", and throw good money after bad. We have already invested in this project, but the only rational reason on which to base your decision now is future consequences. The CFPP is a risk we do not have to take, and one that will likely keep us from attaining our carbon neutral goal as quickly as possible.

Thank you for working towards a carbon-free future for Los Alamos!

Sue Barns, Los Alamos

Name not available

August 8, 2020, 5:32 PM

I would rather push harder on solar and wind with storage. The target of 55\$/mwh seems excessive considering the risk associated with an unfinished and untested technology

Jason Gochanour

inside DOWNTOWN RESIDENTIAL S

August 8, 2020, 8:35 PM

I fully support bring a SMR to Los Alamos County. The more carbon free technologies we can utilize, the better. And I've always found it quite odd that this town didn't have a nuclear reactor.

Ed Jacobson

inside WHITE ROCK

August 9, 2020, 3:32 PM

8/9/20

This comment supports the position that it is not only irresponsible to continue the County's involvement with the UAMPS Carbon Free Power project, but that continuing involvement will detract from work in support of reaching the County's carbon neutral goal before 2040.

It is time for the Board of Public Utilities and the Los Alamos County Council to vote to exit participation in UAMPS's Carbon Free Power Project. Staff have diligently worked to determine if continued participation makes sense. It has become increasingly clear that it does not. If the County continues to participate, a million dollars, in addition to County staff time, will have been wasted before the next off-ramp opportunity. ("Cost-to-date for the County, DOE and Los Alamos National Laboratory is \$258,673. He further reported that the County's share for the 11.186 megawatts would be \$1,046,849 for the next

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phase.” As reported in the LA Daily Post 8/3/20.)

From the UAMPS presentation to Los Alamos County on the Carbon Free Power Project by Mason Baker, UAMPS General Counsel, at:

https://www.losalamosnm.us/UserFiles/Servers/Server_6435726/File/Government/Departments/Public%20Utilities/DPU%20Files/CFPP/DPU_BR170112%20Final%20UAMPS-%20CFPP%20presentation.pdf

The map on slide 5 shows the locations of UAMPS members.

36 are in Utah.

3 are in California.

3 are in Idaho.

2 are in New Mexico.

1 is in Nevada.

1 is in Oregon.

Of those 46, 36 are currently participants in the Carbon Free Power Project. (The current County FAQs put the number of participants at 37.)

At the Los Alamos County website's FAQs it is stated that the expected life of the small modular reactor is 60 to 80 years. Assuming that occurred, costs do not end there. Slide 15 assumes the small modular reactor finally operates and will then someday be decommissioned. It states that the decommissioning period begins at the end of the operating period and continues until the CFPP is fully decommissioned and all decommissioning costs and liabilities have been paid and discharged. It is conceivable that electric bills of Los Alamos County ratepayers could be affected for a century if the County does not get out.

Los Alamos County has an 11 MW capacity interest in the 720 MW capacity of the plant. That 1.5% interest makes the County a small, if not insignificant, player.

Figures for Los Alamos County currently available on the County's website show that in 1985 the County's electrical power resources were:

36 MW San Juan 4

10 MW Laramie River

8 MW El Vado

18 MW Abiquiu

1 MW Western Area Power Administration

1 MW Photovoltaic array at East Jemez Road landfill

County transmission arrangements

County purchased power contracts

https://www.losalamosnm.us/government/departments/utilities/energy_resources

Whether those are still good numbers, total available of 74 MW, is good enough. 74 MW is only slightly more than 2% of the wind generating capacity in New Mexico that is already installed plus what is under construction. (74 / [1953 + 1447])

According to the U.S. Energy Information Administration, New Mexico at the end of 2019 had 1,950 MW of wind generating capacity.

<https://www.eia.gov/state/?sid=NM>

An undated webpage shows that installed wind generating capacity in New Mexico is 1,953 MW, with 1,447 MW under construction. The electric grid mix shows wind generation providing over 19%.

<https://windexchange.energy.gov/states/nm>

The percentage of Texas' electrical power generation provided by wind has increased dramatically:

In 2003, it provided 0.8%.

In 2010, it was 8%.

In 2019, 22%.

<https://www.cnn.com/2019/07/25/us/texas-wind-energy-trnd/index.html>

In August 2019, Texas' wind generation capacity was 24,200 MW.

<https://www.eia.gov/todayinenergy/detail.php?id=40252>

Note that 74 MW is 0.3 % of Texas' wind generation capacity.

It seems clear that carbon neutral electrical power for Los Alamos County does not have to wait until 2040. And to meet that goal, there does not need to be any dependence on a currently not-built, unknown-cost, and unlicensed small modular reactor of unknown lifetime and having unknown decommissioning costs. Now is the time for Los Alamos County to exit UAMP's CFPP.

I suggest that County staff who have been spending time and energy on UAMPS activities redirect their efforts to activities associated with The Wind Coalition. "The Wind Coalition is the industry trade association created to promote the development of the wind energy resource as a

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clean, reliable, affordable, and infinite source of power. The Wind Coalition is the wind energy industry's voice within the Electric Reliability Council of Texas (ERCOT) and Southwest Power Pool (SPP) systems, which include Texas, Kansas, Oklahoma, Nebraska, Arkansas, Missouri, New Mexico, and Louisiana. The organization works to expand transmission capacity, increase wind power use within the region, and facilitate wind power export." <https://windexchange.energy.gov/states/tx>

As Bob Dylan might say, the answer for a carbon-neutral Los Alamos County lies not in as-yet non-existent small modular reactor, but rather in the proven, existing and rapidly-increasing amount of wind-generated electrical power available in the Southwest. In other words, the answer is blowin' in the wind, and it is becoming louder with each passing year. Why not make the goal 2030 instead of 2040?

David Reagor

inside WHITE ROCK
August 9, 2020, 4:39 PM

Dear Utilities Board:

The carbon free power project, also known as the small modular nuclear reactor project, is the kind of long-term effort that is necessary to secure the energy future of the county. There are four advantages to this project:

1. This is a power source that will provide power when it is needed. Wind and solar power arrive without control.
2. Using power from widely varied sources increase the ability to absorb unpredictable changes in the future.
3. The DOE has agreed to support a large portion of the development costs.
4. We can eventually make this a local power source and can eliminate the vulnerability of long distance transmission. We can increasingly be in possession our own power supply.

The first two items are about short-term and long-term stability. Without the DOE commitment this project could

not continue. The consortium met their responsibilities to us by obtaining that commitment and we should respond by continuing our support. Joining this project was a wise decision by previous councils and we should demonstrate continuity and stability.

Barbara Smith

inside WESTERN
August 9, 2020, 8:52 PM

I am in favor of continuing with the next phase of the carbon free power project. Nuclear energy is the highest-density energy available at this time, environmentally sound as it requires minimal land use, does not generate air pollution, does not depend on the sun shining or the wind blowing and is free of carbon emissions. "Go for it."

Dianne Coane

inside BARRANCA MESA
August 9, 2020, 8:57 PM

Please support the reactor component.
Thank you,
Dianne Coane

Michael Dempsey

inside WHITE ROCK
August 9, 2020, 10:24 PM

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Dear Board of Public Utilities and the County Council:

The purpose of this letter is to ask for the DPU and County Council to APPROVE the continued funding of the Small Modular Reactor Project in connection with the Carbon Free Power Project.

Los Alamos County showed foresight in the 1980's when they purchased the El Vado and Abiquiu hydro-electric projects for \$80 million. Both Abiquiu and El Vado Lakes

Carbon Free Power Project (CFPP)

Should Los Alamos continue on to the next phase of the Carbon Free Power Project (CFPP) - a nuclear electric generation facility proposed to be constructed at Idaho National Laboratory that uses small modular reactor (SMR) technology?

are at extremely low levels (I was at both on Saturday August 8, 2020). The predictions are that they won't be filling anytime soon, and both dams are really showing their age. Abiquiu has a leak so it can't be filled to capacity, and what is up where the El Vado dam is settling and the road/steel plates are bowed down? All infrastructure has a lifetime, how long were these dams designed for?

As discussed many times, even if Los Alamos county never receives one DIRECT electron from the project (800 miles away) we will still be contributing to Base Load Carbon Free Electricity to Planet Earth and the United States, and we can swap our low cost Base Load Electricity for other, closer Base Load Electricity. We will DIRECTLY be preventing a lot of carbon emissions the same as we did with El Vado and Abiquiu, preparing the way for Robust, Reliable, Base Load Nuclear Electricity. The project could pave the way for the possibility of a modular reactor (or a few) here in Los Alamos in the future.

If we were really positive and forward thinking we could arrange the much touted pumped storage scheme and use those reservoirs for the cooling lakes as well as pumped storage and fishing! (Triple Use: 2 X Power + Recreation = WIN!)

I have only lived in Los Alamos County for 27 years so I cannot name the DPU or County Council members that had the foresight to purchase the El Vado and Abiquiu hydro stations, but they were smart and forward thinking! They were Giants, and we stand on their shoulders!

Thank you for your support on this. Be a Giant!

Sincerely,

Michael A. Dempsey
300 Connie Ave.
White Rock, NM 87547

A couple of Notes:

In today's world, if you don't have reliable electricity, you have NOTHING. No monetary transactions except cash, and that is a maybe because without scanners, beep beep,

and the internet there is no inventory control. I bet everyone on the Council and DPU board can make change and estimate tax in their head. Think about the kids running the registers today. Very few monetary transactions will be possible. Gasoline at the stations can't be pumped, natural gas to your water heater can't be CONTROLLED from the producing basins to your house, water can't be pumped from the wells by the river to 1000 feet higher to your sink.

If you don't have electricity, you don't have any monetary transactions, water, lights, heat, inventory control, pricing information, transportation, communications and on and on and on. Without Reliable-Robust Base Load Electricity we will have nothing. Wind, solar, and batteries are a mostly dead end.

A steel arc furnace (wind turbine towers, concrete rebar, bearings etc.) cannot be run on a wind/solar/battery system, so to make the actual components of wind turbines and pure silicon for solar panels reliable base load electricity is needed. Right now and for the foreseeable future this only includes Natural Gas, Coal, Hydro and Nuclear.

Wind turbines produce electricity about 25% of the time. Not all sites are suitable for wind turbines. (little or intermittent wind and Eagle Chopping).

Solar is by night/day definition and conditions OFF for 50% of the time but the actual capacity is about 25% also. The most cost effective photovoltaic cells are about 25% efficient when new and drop off over time. $0.25 \times 0.25 \times 100$ (for percent) = 6.25% actual efficiency. (even if there is never a cloud: $0.25 \times 0.5 \times 100$ for percent) = 12.5% efficient.

Any battery system can only run at less than 50% efficiency. If it gets hot (inverter/transformer) or makes noise (transformer/charger) you are losing energy. Scientists have been looking for over 100 years to improve battery performance. Chemistry has its limits. Battery charging/discharging is still only 50% efficient at best. Do you feel your phone getting hot?

Please see below and the executive summary page 7.

Carbon Free Power Project (CFPP)

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http://www.nmprc.state.nm.us/utilities/docs/2011-12-21_Final_Report_NMPRC.pdf

February 2011 was NOT memorable to people living in Los Alamos County. That was the time during a extreme weather event (the same thing happened in 1966 and 1979) when most of the state dropped to -17F and remained <20F for a week. Los Alamos county DID NOT run out of natural gas because of the 3 foot diameter trunk pipeline and the bought-ahead contracts which supply the Lab, County and the Labs natural gas fired power plant. For almost a week it was cloudy (no solar) and foggy with freezing fog (no wind). The natural gas supply went off (Texas had bought ahead contract also) and so did all the pilot lights from Taos to Carlsbad. Many Natural Gas powered generating stations went off line due to high demand and short supply as well as inoperable stations due to extreme conditions. People in the Espanola Valley were moved into shelters, because they had no heat and sometimes no electricity (rolling Black Outs) and the National Guard was called out to relight pilot lights all over the state.