



UTAH PUBLIC
SERVICE COMMISSION

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REPLY COMMENTS

Docket #22-035-35,

Utah Citizens Advocating Renewable Energy's Request
for Agency Action to Reform the Integrated Resource Plan Guidelines

September 9, 2022

Dear Commissioners,

Utah Citizens Advocating Renewable Energy [hereafter "UCARE"] appreciates this opportunity to submit Reply Comments in support of our Amended Request for Agency Action, dated July 18, 2022. We offer responses to those parties whose comments have questioned the appropriateness of, and need for, the action we have requested: the Commission's review of IRP Guideline 4(k), dealing with externalities, in the interests of effecting its necessary reform. We trust that the Commission will give thoughtful consideration to the case we present and will order continuation of IRP Guideline 4(k) examination, analysis, and assessment through Docket #22-035-35.

Please note that all references to "IRP", "IRP Guidelines", "Guidelines", and "Guideline" in these UCARE Reply Comments refer to the Integrated Resource Plan process and Guidelines established by the Utah Public Service Commission [hereafter "PSC"] in its Order of June 18, 1992 [aka "1990 Order"] in its Docket 90-2035-01 that created a system for regulating the actions of PacifiCorp's [dba Rocky Mountain Power] electrical utility service in Utah. Additionally, all references to "comment" or "comments" refer, unless otherwise indicated, to Comments or Responses filed with the PSC in Docket 22-035-35.

* UCARE's Amended Request for Agency Action is Statutorily Legitimate

UCARE will respond first to comments submitted by the Office of Consumer Services/Attorney General's Office [hereafter "OCS"] and the Division of Public Utilities [hereafter "DPU"] that our request does not meet conditions set by several sections

under Utah Code 63G chapters 3 and 4, covering Administrative Rulemaking and Administrative Procedures respectively.

> In its comment of August 19, 2022, OCS states that "UCARE's request does not meet several of the technical requirements of Utah Code 63G-4-201". For example, referencing "63G-4-3(b)" [at 63G-4-201(3)(b)], OCS charges that our request was "not sent to all persons known to have a direct interest in the requested agency action."

UCARE's response is that on June 29, 2022 we submitted our initial request to the PSC in an email with subject line "Docket 21-035-09 ... Request for agency action to reform IRP guidelines" whose content confirmed the same. We assumed that this request, in response to the Commission's invitation included with its June 2, 2022 Order in Docket 21-035-09, would be posted to Docket 21-035-09. Parties interested in issues of that docket and order would thereby have been apprised of UCARE's response and request. We were not aware that our request would be posted to a new docket; but, we appreciate the Commission having done so. Additionally, it would be unreasonable to assume that all persons with a direct interest in this matter could be contacted. For example, should all 853 individuals on UCARE's distribution list have been sent the initial and amended requests? Should we have contacted all of the civic groups and officials representing communities especially vulnerable to health, economic, and environmental externality costs associated with PacifiCorp's fossil-fueled energy generation units in Utah? We feel that would be unreasonable.

> Citing 63G-4-201(3)(a)(iv), OCS then claims that UCARE's request failed to "provide a statement of the legal authority and jurisdiction under which agency action is requested."

We ask parties to please remember that UCARE's request was filed in response to a lawful order of the PSC which included a statement that "Any party who believes reforms to the guidelines are necessary may file a request for agency action." The PSC's Order, in Docket 21-035-09, also contained a "Notice of Opportunity for Agency Review or Rehearing" that an aggrieved party could file a "written request with the PSC." UCARE does not question the Commission's legal authority and jurisdiction in this context.

> OCS proceeds to reference "Section 63G-4-3(a)(v)" [at 63G-4-201(3)(a)(v)] saying that UCARE's request "does not provide a specific statement of the relief requested." UCARE disagrees with this claim and with OCS' contention that we've requested the PSC to

undertake a "broad, all-inclusive" proceeding "without any direction from the requesting party."

On the contrary, UCARE's initial, June 29, 2022 Request for Agency Action asked for "review and reform [of] the IRP Guidelines" in response to that part of the PSC's Order, under 21-035-09, inviting such action from "[A]ny party who believes reforms to the Guidelines are necessary." That initial request elaborated upon UCARE's "particular concern" for "Guideline 4(k)'s dismissive treatment of externalities as a factor in utility resource decisions and ratemaking." And on July 18, 2022, UCARE's Amended Request for Agency Action makes clear our intent to focus specifically on the externalities Guideline, 4(k), not additional IRP Guidelines; and we request specific relief from the PSC that includes "opportunities to:

- ~ identify and describe the full range of externalities associated with PacifiCorp's electricity generation in Utah;
- ~ present sets of data from multiple sources for the quantification of these externalities;
- ~ explain how IRP Guideline 4(k), developed in 1992, is not well-suited to current economic, environmental, and societal conditions or to the data bases and models now available;
- ~ discuss new applications of externality factors to the IRP process that comport with the Commission's mission and regulatory objectives; and,
- ~ propose a revision of Guideline 4(k) that better reflects the importance of incorporating externalities into the IRP process and includes a methodology for doing so.

We hope that the Commission and all interested parties will agree to at least one technical conference focusing on externalities.

To summarize this Amended Request for Agency Action, it is UCARE's desire and intent to focus exclusively on IRP Guideline 4(k)".

Therefore, UCARE argues that these elements of our request are not "amorphous suggestions", as the OCS would have other parties believe. We hope the PSC finds enough specificity in what we've requested to decide "whether to grant, deny, or order further proceedings."

UCARE also wishes to note that we found the OCS comment somewhat confusing.. caroming, as it does, back and forth over issues of specificity. On the one hand, OCS charges that "[R]ather than proposing specific relief...UCARE simply proposes a general topic..." OCS then proceeds to warn that "[S]pecific requirements and expressed methodologies" --presumably resulting from UCARE's request-- could negatively

"transform the IRP modeling process." Next, OCS argues that UCARE has submitted a request "without any direction". Then, as if suggesting that UCARE has indeed offered "a specific proposal as to how a guideline may be amended", OCS argues that UCARE's request is invalid because we "would, presumably, have conducted some analysis" and "developed some expert testimony." By UCARE's count, this portion of OCS's argument against our request numbers 23 this-way-that-way references to specific or specificity.

In response, we say that UCARE has asked the PSC to initiate a proceeding focused on a review of one IRP Guideline: 4(k). We have identified the activities we would like to see included in that review. Our initial and amended Requests for Agency Action are based on analysis of documents [please see our Exhibits] sufficient to justify a docket in which additional expert testimony can be provided and considered by all parties.

> The DPU argues, in its comment of August 19, 2022, that UCARE's request pursuant to 63G-4-301, especially at -301(1)(a), may be precluded because it wasn't filed within 30 days after issuance of the "1990 Order" of June 18, 1992, in Docket 90-2035-01, establishing the IRP Guidelines. In addition, DPU holds that UCARE's request could be denied under Utah Code 54-7-15, because: 1) we were not a party to Docket 90-2035-01, and 2) "it is not clear whether UCARE is asserting that it is a 'stockholder, bondholder, or other party pecuniarily interested in the public utility affected' by the 1990 [PSC] Order.

UCARE responds that our Request for Agency Action was submitted in timely response to the PSC's June 2, 2022 order under Docket 21-035-09 which states that "Any party who believes reforms to the Guidelines are necessary may file a request for agency action." Though not required here, UCARE would argue that we are among the many Utah parties "pecuniarily interested" --as ratepayers and members of the at-risk public-- in the disposition of PacifiCorp's (dba Rocky Mountain Power) handling of externality costs that the utility continues to shift to us to pay.

* UCARE's Amended Request for Agency Action is Appropriate.

Under Utah Code 54-1-1, the PSC "is charged with discharging the duties and exercising the legislative, adjudicative, and rule-making powers committed to it by law." Its primary responsibility is "to ensure safe, reliable, adequate, and reasonably priced utility service." The PSC established IRP guidelines in 1992 through its order in Docket 90-2035-21, noting that the newly established IRP process "is expected to evolve over time and thus need

periodic revisiting." Under Utah Code 54-7-14.5(1), "the commission [PSC] may, at any time after providing an affected utility notice and an opportunity to be heard, rescind, alter, or amend any order or decision made by the commission." The PSC, therefore, has the authority to amend the IRP Guidelines and in 1992 foresaw the likelihood that this might become necessary.

UCARE begs to differ with DPU's suggestion that because "[T]he Utah Legislature has not given policy guidance on the subject of externalities", the PSC is not sufficiently prepared to conduct the review of IRP Guideline 4(k) that UCARE has requested. We maintain that the PSC has been granted wide-ranging utility regulatory authority because the Utah Legislature recognizes the commission's expertise and has entrusted it to properly conduct these proceedings.

We are reminded that the DPU, citing continued flaws in PacifiCorp's 2013 IRP, suggested revisions to the IRP Guidelines in its September 9, 2013 recommendation that the PSC not acknowledge that year's IRP. [see Exhibit A].

In Attachment B [see Exhibit B] to that 2013 correspondence, DPU suggested the following revision to the externalities IRP Guideline 4(k): "A discussion of external costs and benefits; in particular, an assessment of how a significant change in the Company's [PacifiCorp's] expectations of future environmental costs (e.g. forecasts of any carbon taxes and expenditures for pollution control equipment) would change the Company's IRP."

There was no mention of a need for legislative guidance in the context of the DPU's suggested revision of the externalities guideline, presumably because DPU understood that the PSC was capable of handling the matter without legislative help.

UCARE is aware that DPU's 2013 displeasure with the IRP Guidelines, including 4(k), was preceded by its 2008/9 IRP comment, of June 18, 2009, invoking the words of the PSC's 1992 Order (90-2035-01) that: "The [IRP] process is expected to evolve over time and thus need periodic revisiting." DPU continued that "The Division believes that the process has evolved over time, and it is now time to revisit the process. We have observed problems, issues, suggestions, improvements, delays, and many other changes over the past 19 years."

In 2022, we are now 30 years past the IRP Guidelines creation. UCARE argues that revisitation should finally occur focused, in Docket 22-035-35, on review and revision of the externalities guideline, 4(k).

> UCARE also disagrees with DPU's contention that "[I]t is infeasible to open an investigation into one specific IRP Guideline without a review of other IRP Guidelines." We understand that the PSC has established authority to set parameters for what will, and will not, be admissible in a docket. If the examination of one guideline were to necessitate review of potentially all guidelines, the "onerous and lengthy process" about which DPU warns would surely never happen; and no guideline would ever be subjected to review. But UCARE sees this as a false choice, since the PSC can choose to be selective in the issue(s) a proceeding addresses.

> Meanwhile, OCS opines that UCARE's request could "transform the IRP modeling process from a collaborative process to one more adjudicative in nature." In response, UCARE argues that the primary purpose of the IRP modeling process is to arrive at the best resource plan, not to minimize or eliminate disagreements between parties. Must revision of Guideline 4(k) mean an end to collaboration? We don't think so.

> For its part, DPU worries that UCARE's request might lead to involvement by a multitude of parties and stakeholders and that a review could last over a year. As an example, DPU points to the time and effort invested by parties involved with net-metering dockets, such as 17-035-61. UCARE asks the PSC to look at how much time and effort is invested by all parties in the seemingly continuous, biennial IRP process that DPU has numerous times over the years found to be flawed, with PacifiCorp in violation of the guidelines and non-compliant with PSC directives. We look forward to focusing on, and hopefully fixing, one problematic IRP Guideline, 4(k).

DPU also seems concerned that "Dominion Energy Utah (DEU) may be affected and wish to participate." UCARE feels that DEU *should* be represented in the Docket 22-035-35 proceeding and may provide helpful information and ideas. Resolution of externality guideline issues for PacifiCorp could well have applicability to Dominion's handling of the same. Perhaps the PSC will see value in standardizing an updated externalities approach applicable to both utilities.

> DPU raises some procedural issues that may or may not have relevance to our request. DPU wonders if UCARE wants a rehearing of the 90-2035-01 Report and Order, though we have not asked for that. And we are disinclined to agree with DPU's suggestion that UCARE's request could require a rulemaking procedure rather than a docket. We've

learned that under Utah Code 63G-3-102 [rulemaking definitions] and specifically 63G-3-102(19)(c), "[R]ule does not mean: (i) orders." We therefore assume that the PSC's 1990 Order, in Docket 90-2035-01, is not a rule.

This suggestion by the DPU reminds us, however, that there are other options under which the PSC might proceed in the context of UCARE's amended request, such as initially ordering a technical conference involving parties and interested persons, in accord with Utah Code 63G-4-102(4)(a)(ii), to "clarify the issues" that should inform the scope of the Docket 22-035-35 proceeding.

* IRP Guideline 4(k) Needs Review and Reform

In its June 2, 2022 Order, the PSC withheld acknowledgement of PacifiCorp's 2021 IRP. That's not the first or the second time that PacifiCorp has failed to meet IRP standards and may not be the last. Ten years ago, in its March 22, 2012 Order, the PSC refused to acknowledge PacifiCorp's 2011 IRP stating that "we find the Company [PacifiCorp] has not sufficiently complied with the Guidelines." Echoing the debate over externalities in that IRP cycle, the PSC noted that "The Office [OCS] suggests any valid externality values used by the Company [PacifiCorp] should be agreed upon by parties or should be set by the Commission."

UCARE believes that the externality values used during the IRP process should be annually agreed upon by stakeholding parties AND should be set by the Commission. We feel that PacifiCorp should be *required* to operationalize externality costs set by the Commission, not by PacifiCorp.

> Another OCS comment expresses concern about the value of pursuing UCARE's request, given "the need for the PSC to control its dockets and the stakeholders' collective ability to control the amount of resources needed to respond to various regulatory filings." The implication here is similar to the objection raised by DPU: that an effort to review and possibly reform the IRP externalities guideline, 4(k), is not worth the time and effort of the PSC and stakeholders.

UCARE responds that our request is no ordinary regulatory filing. In 30 years, there has not been a docket or other proceeding focused exclusively on the review and potential reform of an IRP guideline, though the PSC noted in its 1992 order establishing the IRP Guidelines that "The [IRP] process is expected to evolve over time and thus need periodic

revisiting." That order, under 90-2035-01, noted that new regulations "have forced industry to accept financial responsibility for costs formerly borne only by society." The PSC warned then that "if the process persists" [*which it has*], "utilities which acquired resources with high external costs are at risk".

In Utah, PacifiCorp's fossil fuel assets and operations continue to engender costs borne only by society along with risks that those costs "will ultimately be borne by either the ratepayer or the stockholder." UCARE's request seeks an examination of these costs and risks that should inform more prudent resource decision making choices than the current IRP process has produced. In the current context of intensifying climate crises, fueled by fossil fuel emissions from electricity generation units, UCARE asks the PSC to consider that there is no single regulatory issue more important than revising the externalities guideline, 4(k), to incorporate all real-world factors affecting PacifiCorp's resource choices.

> According to OCS, the review UCARE has requested "is neither necessary nor in the public interest." We counter that the review *is* necessary because the leeway given PacifiCorp, under Guideline 4(k) as written, to decide the magnitude and valuation of externalities likely excludes relevant costs and may preclude resource choices that would better serve the long-run public interest. We are reminded that PacifiCorp is motivated primarily by its corporate business interests, not public service or the public interest. The current IRP process has seen PacifiCorp violate guidelines with relative impunity...again in the 2021 IRP.

UCARE contends that the externalities guideline, 4(k), is uniquely critical to the short- and long-term public interest and warrants revision to assure its efficacy. UCARE argues that future proceedings of Docket 22-035-35 will expose the faults in 4(k) and facilitate the PSC's consideration of that guideline's necessary revision.

> OCS claims that "[A]s written, this guideline [4(k)] is sufficient to require PacifiCorp to address the issues UCARE suggests are needed to be improved". Our response is that Guideline 4(k) is insufficient because it does not *require* PacifiCorp to do anything more than "attempt to quantify the magnitude of the externalities." PacifiCorp has quantified, and continues to quantify, a set of externalities of its choosing. Where 4(k) says "*the* externalities", stakeholders should be safe in assuming this means *all* externalities, not some externalities that PacifiCorp decides to include.

UCARE disagrees with OCS' contention that "PSC does not need to update Guideline 4(k)" because it is "sufficiently durable and appropriate for current resource planning." We claim that Guideline 4(k), as written, is neither durable nor appropriate since PacifiCorp has demonstrated that it cannot be relied upon to follow the Guidelines, leading us to doubt its commitment to the externalities Guideline 4(k).

Our attention is again drawn to the 2021 IRP, where the PSC noted "PacifiCorp's persistent disregard" for Guideline 3 and behavior inconsistent with Guidelines 4(b) and 4(i). Despite having been shown "latitude" for misbehavior in the previous two IRP cycles [2017, 2019]..."rather than respect our regulatory directives and work to improve its process, PacifiCorp showed even greater disregard for stakeholder participation in its 2021 IRP." In that context, the PSC found that PacifiCorp had unilaterally decided to exclude one resource option --natural gas-- from its models without meaningful stakeholder input, thereby prematurely foreclosing that resource option from consideration. UCARE wonders why, then, stakeholders --including shareholders, rate payers and Utah's general public-- should trust PacifiCorp to responsibly quantify the magnitude of *the* [all, not some] externalities for explicit consideration that might affect selection of resource options? We contend that IRP Guideline 4(k), as written, allows an inherently flawed process to persist. One need only look at the latest IRP and the fossil fuels heavy energy mix projected for Utah to appreciate how PacifiCorp has failed to seriously consider the current climate crisis conditions faced by Utahns.

> In the technical appendix to its 1989 Resource and Market Planning Program (RAMPP1) that predates establishment of the IRP Guidelines, PacifiCorp identified "a partial list of potential externalities that could affect a particular resource decision". [see Exhibit C]. 33 such externalities were listed, though PacifiCorp noted that "[T]his list is not an exhaustive list of possible externalities." UCARE wonders whether PacifiCorp has updated that list and where it is available. In the same 1989 RAMPP1 report, PacifiCorp held that "the issue of global warming is highly speculative" and that "consensus has not been reached within the scientific community regarding the possibility of a human-activity induced change in global climate."

In 2022, we know that there has been for many years a consensus of the scientific community that human activity is driving global and local climate change. [Exhibit D is the 2019 IPCC special report on greenhouse gas emissions and climate change] Nevertheless, PacifiCorp was to be commended then for having identified some

externalities and having considered resource options --"repowering" and "retiring"-- that might be employed to reduce carbon dioxide emissions.

Today, we wonder how resource planning in PacifiCorp's 2021 IRP --and it's less solar friendly Update-- would have been different if PacifiCorp had "repowered", shifting coal EGUs to natural gas, or "retired" a coal EGU in favor of renewables, storage, and/or more flexible grid integration. We are aware that DPU noted in its 2021 IRP comment of March 4, 2022, that PacifiCorp failed to include stakeholder input that might have resulted in a different "least cost, least risk" preferred portfolio. Instead, PacifiCorp proceeded with its favored model that was presented to stakeholders as a "done deal." Given its apparent violation of Guideline 3, we question whether PacifiCorp should be trusted to honor its charge under Guideline 4(k) as the entity solely responsible for factoring externalities into the IRP?

> UCARE feels that the PSC should press PacifiCorp to reveal all aspects of its methodology for calculating the externality values into its preferred portfolio. We are aware that at the time the IRP Guidelines were established in June 1992, PacifiCorp estimated in its RAMPP2 document that the federal government might impose a CO2 tax beginning at \$30 per ton emitted that, increasing annually with the rate of inflation, would become problematic for the continuation of coal generated power. Thirty years later, externality costs associated with CO2 range to \$185 per ton and above, yet PacifiCorp's (dba Rocky Mountain Power) Huntington and Hunter coal-fired EGUs collectively emit nearly 17 million tons of CO2 per year and are expected to continue operations until 2036 and 2042 respectively.

> Western Resource Advocates and Utah Clean Energy [hereafter "WRA"] in their combined comments of August 19, 2022, argue that "The existing Guidelines, including 4(k), allow the IRP process to adapt to a wide array of uncertain and evolving factors over time", continuing that "The Utah IRP has historically focused on evaluating all relevant resources 'and the factors influencing choice among them...in the search for an optimal set of resources given the expected combination of costs, risks and uncertainty over the long run..'"

UCARE's response is that PacifiCorp's Utah customers and general public have no evidence that the existing IRP Guidelines have resulted in an optimal set of resources or that they will if Guideline 4(k) remains unchanged. We point to PacifiCorp's repeated

violations of the Guidelines and PSC directives over multiple IRPs, as noted by the DPU and the PSC, and the DPU's advice over the years that the IRP process and Guidelines, including Guideline 4(k) on which UCARE wishes to focus, warrant review and revision as suggested in the 1992 PSC Order that created the IRP Guidelines. In 2022, as a widely recognized, carbon emissions-fueled climate crisis continues to worsen [Exhibit E] and increasingly threaten the well-being of Utah residents [Exhibit F], how can an IRP system that allows PacifiCorp to operate coal-burning power plants in Utah past 2040 be considered "optimum"? It is apparent to UCARE that the "expected combination of costs, risks and uncertainty" allowed PacifiCorp by the current IRP Guideline 4(k) does not square with findings and advisories of the international community of climate scientists or researchers in Utah. [see Exhibit G, BYU study]. For these and other reasons stated previously, UCARE disagrees with WRA's claim that "existing Guideline 4(k) provides an appropriate framework for evaluating externalities over time." We believe that 4(k) now accommodates PacifiCorp's resource planning agenda to the detriment of consumers and the general public in Utah.

> WRA states that Guideline 4(k) "eschews prescribing a specific quantification or limitation on the consideration of externalities" and durably requires "a range of estimates instead of prescribing a specific externality calculation method." But continued implementation of the original 4(k) has in practice allowed PacifiCorp to establish a specific externality calculation using a particular model and data set it has selected rather than other models and data sets now available. In this regard, PacifiCorp (dba Rocky Mountain Power) has become a self-regulating electricity provider in Utah.

UCARE believes that determination of externalities factors in the IRP process should not be left to PacifiCorp, which continues to rely on coal and other fossil fuel resources when strong action should instead be taken to mitigate the consequences of climate change. We've found from examining the 2021 IRP, for example, that PacifiCorp's "official forward price curve (OFPC) does not assume a federal carbon dioxide (CO2) policy". The OFPC "represents PacifiCorp's official quarterly outlook" and may not be updated before 2024 or 2025. For UCARE, this represents one more example of PacifiCorp's cavalier attitude toward the causes and consequences of climate change. The 2021 IRP notes further that "The extent to which future regulatory policy shifts do not align with PacifiCorp's resource investments determined to be prudent by state commissions is a risk borne by customers." If the PSC's ability to exercise prudence regarding externalities is

constrained by 4(k), added costs are passed along to rate payers and the general public.

> Finally, while UCARE has participated directly in net-metering dockets before the PSC, WRA rightly points out that "UCARE has not intervened in any previous IRP docket or filed comments during the comment period." WRA continues that "Before requesting a change in the Standards and Guidelines, UCARE should avail themselves of the existing process that already requires ongoing externality analysis."

UCARE's first response is that the existing IRP process *requires* very little of PacifiCorp and, as demonstrated over the years, has failed to ensure PacifiCorp's compliance even after repeated violations. We have elaborated on that point earlier in our Reply Comments.

To WRA's calling out UCARE's previous lack of engagement in the IRP process: we are reminded that parties traditionally involved with the process, including WRA, are in their own rights reputable and ably staffed with professionals to cover a never-ending IRP process where supposedly biennial cycles overlap as they have for the 2021 and 2023 IRPs that were concurrently active in 2022. All-volunteer civic groups such as UCARE haven't the capacity to constantly monitor and engage with the ongoing IRP process(es). Nor should we or other members of the concerned lay public have to trust and hope that those organizations able to fully participate will arrive at IRP outcomes that best serve the public interest. UCARE's position is that a properly revised, strengthened Guideline 4(k) will obviate the need for non-professionals to engage with the IRP process. That is the outcome we desire and urge the PSC to pursue.

* UCARE's Exhibits Identified and Described

Exhibit A - DPU's 9-9-2013 Comment citing continued flaws in PacifiCorp's 2013 IRP, suggesting revisions to the Guidelines, and recommending that the PSC not acknowledge that year's IRP.

Exhibit B - Attachment to DPU's 9-9-2013 Comment and suggesting IRP Guidelines revisions to include externalities Guideline 4(k)

Exhibit C - 1989 Resource and Market Planning Program (RAMPP1) technical appendix section that includes "a partial list of potential externalities that could affect a particular resource decision".

Exhibit D - 2019 special report of the Intergovernmental Panel on Climate Change (IPCC)

dealing with greenhouse gas emissions and climate change.

www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_Low_Res.pdf

Exhibit E - 2022 UN Report: It's Now or Never to Limit Global Warming

Exhibit F - KSL News..Salt Lake City reaches heat record again; wildfire smoke coming, 9-9-2022

Exhibit G - 2020 BYU Study: Human Health and Economic Costs of Air Pollution in Utah

Additional References:

Exhibit H - Salt Lake County's Climate Adaptation Plan, 2017. Budgetary requirements not included.

Exhibit I - Federal Interagency Working Group on Social Cost of Greenhouse Gases; 2021 technical support document on costs of Carbon, Methane, and Nitrous Oxide

Exhibit J - "Comprehensive Evidence Implies a Higher Social Cost of CO2," Nature, August 2022. ["Costs of climate change far surpass government estimates", Washington Post]

Exhibit K - Health and Economic Benefits of a 2-degree C Climate Policy; 2020, Shindell, Duke.

Exhibit L - Examples where easy online access to 2021 IRP process and data information is restricted by CONFIDENTIALITY

To conclude these Reply Comments, UCARE is confident that the Commission will give thoughtful consideration to the case we've presented here and will order a thorough examination, analysis, and assessment of IRP Guideline 4(k) through Docket #22-035-35.

Thank you.

Sincerely,



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