May 13, 2010

Jay Clement
Maine Project Office
US Army Corps of Engineers
675 Western Ave.
Manchester, ME 04351

Re: NAE-2008-03017, Maine Power Reliability Program

Dear Mr. Clement,

GridSolar, LLC, submits the following comments in reply to Central Maine Power's ("CMP") May 5, 2010 letter regarding its Maine Power Reliability Program (MPRP) application #NAE-2008-03017.

1. CMP Has Failed To Provide A Legally or Factually Adequate Alternatives Analysis

In its May 5 letter, CMP concedes that the "basic purpose" of the MPRP – to ensure reliable, safe and cost-effective operation of the electric grid – is not a water-dependent activity and that the dual presumptions at 40 C.F.R. § 230.10(a)(3) apply. (*See* D. Dominie, Letter to Jay Clement, May 5, 2010, at 3, hereinafter as "*CMP Letter*"). Thus, the Corps must presume that a practicable alternative to the MPRP is available and is less environmentally damaging, unless CMP can "clearly demonstrate[] otherwise." 40 C.F.R. § 230.10(a)(3).

CMP, however, falls fall short of meeting this burden. Instead of demonstrating that the MPRP is LEDPA, CMP wrongly attempts to restrict the range of alternatives that can be

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considered. (*CMP Letter*, at 3-7). CMP's contention is apparently that the "overall project purpose" is narrower than the "basic purpose," and since the MPRP was proposed as a transmission project, the overall project purpose is to meet CMP's reliability needs through construction of new transmission capacity. As such, CMP contends that non-transmission reliability solutions are off limits to the Corps' LEDPA analysis. (*CMP Letter,* at 7) ("proper review [of alternatives] would focus on factors such as routes, pole placements and spans, and size and location of substations").

CMP's attempt to re-define the purpose of the MPRP from a grid reliability project to a transmission construction project is a transparent effort to avoid both the Corps' rules and longstanding practice, and should be rejected as contrary to the law and the facts of this case. By definition, "[a]ctivities which do not involve a discharge of dredged or fill material into the waters of the United States…" are presumed to be available alternatives in the LEDPA analysis. 40 C.F.R. § 230.10(a)(2). Here, there are multiple non-transmission alternatives ("NTA") – including efficiency, demand response, smart grid components, battery storage, photovoltaic solar energy, and distributed generation – that would provide equally reliable, safe and cost-effective service for CMP's customers but which, by their nature, do not involve discharge of dredge or fill materials into the navigable waters.

Therefore, these NTAs must be part of the LEDPA analysis. In fact, CMP identified and analyzed several of these NTAs as part of its original 404 alternatives analysis and incorporated certain NTAs into the final MPRP proposal. (*See* CMP, *NRPA Application – Maine Power Reliability Program, Alternatives Analysis,* June 2009, at ch. 2 (hereinafter as "*NRPA App*.")) Thus, having included NTAs in the MPRP, CMP cannot now claim that NTAs are outside the

scope of the overall project purpose – they are, in fact, an integral part of the project.[1]

Regardless, the Corps' rules expressly state that the § 404 alternatives analysis must consider, "the practicability of using reasonable alternative locations *and methods* to accomplish *the objective* of the proposed structure or work." 33 C.F.R. § 320.4(a)(2)(ii) (emphasis added). Here, as noted by both CMP and GridSolar in previous filings, non-transmission methods can clearly and fully accomplish the reliability, safety and cost objectives of CMP's proposed transmission project. Thus, NTAs must be part of the Corps' alternatives analysis; anything less would obstruct the intent of Congress in establishing the § 404 program. *See National Wildlife Federation v. Whistler*, 27 F. 3d 1341, 1346 (8th Cir. 1994) ("The cumulative destruction of our nation's wetlands that would result if developers were permitted to artificially constrain the Corps' alternatives analysis by defining the projects' purpose in an overly narrow manner would frustrate the statute and its accompanying regulatory scheme.").

This approach to the LEDPA analysis should not be new or surprising. Rather, it is the regular practice of the Corps and the courts to consider a broad range of alternative methods to accomplish the applicant's objectives. For example, for highway and bridge projects, the Corps regularly evaluates non-construction alternatives. *See e.g., Conservation Law Found. v. FHWA*, 827 F. Supp. 871, 886 (D. R.I. 1993) (including no build and transportation system management alternatives); *Utahns for Better Transp. v. US Dept. of Transp.*, 305 F. 3d 1152, 1190 (10th Cir. 2002) (mass transit and travel demand reduction alternatives). Similarly, for reservoir projects the Corps looks at alternative methods of supplying water. *See e.g., Alliance to Save the*

[1] In fact, CMP submitted an analysis of many of these non-transmission alternatives pursuant to 40 C.F.R. § 230.10(a), *see NRPA App.*, at 2-1, and described the NTA solutions as "a variant of the 'no-action' alternative wherein potential NTAs might replace (or avoid) some or all of the proposed transmission segments." (*NRPA App.* at 2-22.) Based on the effectiveness of these alternatives, CMP then included some of them into the MPRP. (*Id.* at 2-23).

Mattaponi v. U.S. Army Corps of Engineers, 606 F. Supp. 2d 121, 130 (D.D.C. 2009) (hybrid alternative including conservation, groundwater and reduction of dead storage in existing reservoirs less environmentally damaging that building new reservoir); *James City County, Va. v. USEPA*, 955 F. 2d 254, 258 (4th Cir. 1992) (alternatives considered included pipeline from another system, conservation, and groundwater). There is no bar here on the Corps looking at alternative methods of providing electric grid reliability; to the contrary, it *must* review such alternatives and find them impracticable or more environmentally damaging before it can issue a § 404 permit for the MPRP.

2. Incidental Purposes, Such As Economic Stimulus or Benefits to Wind Developers Are Not Valid Project Purposes and Cannot Limit the Range of Alternatives

Next CMP attempts to artificially limit the range of alternatives by adding, *post-hoc*, new project purposes such as job creation or support of potential future wind development. (*See CMP Letter,* at 5-7 and 12-13). It is well established that secondary, or "incidental" benefits are not considered part of the project purpose in the alternatives analysis. *See, e.g.*, *Shoreline Associates v. Marsh*, 555 F.Supp. 169, 179 (D.Md.1983), aff'd, 725 F.2d 677 (4th Cir.1984) (the "primary aspect of the proposed project is the construction of a townhouse community, not the construction of a boat storage facility and launch, which are incidental to it."); *Korteweg v. Corps of Engineers of the United States Army*, 650 F.Supp. 603, 606 (D.Conn.1986) (side benefits not integral or essential to project are not part of the project purpose).

Even if inclusion of such incidental purposes were allowable, consistent with its LEDPA burden, CMP must provide evidence of need for that purpose, *see* 33 C.F.R. § 320.4(2)(ii) (the

Corps must consider in every application the "relative extent of the public and private need for the proposed structure or work"); evidence that the MPRP would in fact meet that need; and then clearly demonstrate that presumptively available LEDPA alternatives would not meet those additional purposes. CMP has made no showing on any of these grounds; instead it offers conclusory and wholly unsupported statements that the MPRP will provide wind energy benefits and economic stimulus while speculating that "NTAs provide no comparable benefits." (*CMP Letter* at 12-13.)

Even if these so-called project purposes were relevant – and they are not – CMP's arbitrary and speculative claims fall far short of its burden to "clearly demonstrate" that NTAs do not meet these purposes and therefore are not practicable. *See Mattaponi*, 606 F. Supp. 2d at 130 (speculation is inadequate to satisfy LEDPA requirements). In actuality, CMP's claim that NTAs do not provide comparable benefits is false. As noted in many of GridSolar's filings, its NTA has superior job creation and economic benefits compared to the MPRP. (*See, e.g.*, GridSolar, *Supplemental Filing*, Sept. 8, 2010, at 17-31.) [2] Additionally, distributed generation and smart grid components would have substantial benefits to integration of ephemeral wind resources upon the Maine grid, including the ability to dispatch quick-start backup resources needed to ensure grid stabilization when wind speeds decline. In sum, CMP claims with regard to incidental project benefits such as wind or jobs are neither legally relevant, nor factually accurate.

[2] Submitted to the Corps as GridSolar, Ex. 4.

3. The Maine PUC Staff's *Examiners' Report* Has Again Confirmed That CMP's Assessment of Need for the MPRP is Exaggerated and Accelerated

Contrary to CMP's allegations (*CMP Letter,* at 7-8), both the Clean Water Act and the National Environmental Policy Act ("NEPA") require the Corps to fully analyze and verify the need for the MPRP. *See* 33 C.F.R. § 320.4(a)(1) (Clean Water Act) and 40 C.F.R. § 1502.13 (NEPA). That analysis, in turn is relevant to the LEDPA inquiry. Indeed, it is not uncommon for the Corps to independently assess the need for a project and for that assessment to impact the LEDPA analysis. *See e.g., Mattaponi*, 606 F.Supp. at 125 and 130 (Corps required independent technical review of projected water needs for reservoir water supply project, which was then utilized to assess the practicality of various alternatives).

The same situation applies here. GridSolar does not contend that there is no need for reliability improvements on the CMP grid, but only that CMP has exaggerated demand forecasts and used unreasonable planning assumptions. The result is that the actual level of need is far less and the year of need will come far later than CMP originally estimated in its 2007 *Needs Assessment*. This problem was recently confirmed in both respects by the Maine Public Utilities ("MPUC") Staff *Examiners' Report*. (*See* MPUC Staff, *Examiners' Report*, April 23, 2010, at 53 – 68) (hereinafter as "*ER*")).[3] That report concluded – based on all the evidence submitted during the two years of hearings in the MPRP docket before the MPUC – that peak loads on the CMP system will not reach CMP's original 2007 peak load forecast until 2019 (compare *ER* p. 54 with ER p. 67), and that the CMP system will not reach the 2,200 MW peak load level used by CMP to justify the MPRP anytime within the standard 10 year planning horizon. (*ER,* at 67.) Moreover, the MPUC Staff also rejected the CMP and ISO New England ("ISO-NE") reliability

[3] *See CMP Letter*, Ex. C, for a copy of the Examiner's Report.

analysis, concluding that "ISO-NE's assumptions, especially regarding the unavailability of generation combined with other assumptions such as extreme weather conditions load forecast are unreasonable and do not meet ISO-NE's own requirements…." (*ER*, at 1-2.)

These flaws in CMP's *Needs Assessment* for the MPRP are critical to the Corps' LEDPA analysis because reductions in the amount and year of need have profound implications for the design, cost, and suitability of non-transmission alternatives. Accordingly, as noted in GridSolar's April comments to the Corps, CMP must re-evaluate NTAs in light of the reduced level and year of need in order to satisfy its burden under 40 C.F.R. § 230.10(a).

CMP's May 5 response to GridSolar's comments never addresses this critical point, but instead merely claims that the Corps must defer to the need determinations of the MPUC and to ISO-New England ("ISO-NE"). (*See CMP Letter,* at 7-10.) Again, this is nothing more than CMP attempting to evade its burden to show that the MPRP is LEDPA pursuant to 40 C.F.R. § 230.10(a)(3). Moreover, it is irrelevant. First, CMP ignores the fact that it has revised downward its own demand forecasts in each of the last four years and, thus, cannot reasonably rely upon a stale NTA analysis that is based on what it has already conceded is an exaggerated forecast. (*See* GridSolar, *Brief of GridSolar LLC*, March 9, 2010, at 12-13).[4] Secondly, as noted above, the MPUC Staff has also concluded that CMP's *Needs Assessment* for the MPRP is substantially outdated and substantially exaggerates and accelerates the apparent need for the MPRP.

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[4] *See also Examiner's Report* at 32-44 and GridSolar, *Reply Brief of GridSolar, LLC*, March 23, 2010, at 7- 12 (attached as Ex. 26) for a detailed explanation of why, pursuant to the Federal Power Act, ISO-NE's judgment with regard to the need for the MPRP is not binding upon either the MPUC or the Corps.

As for ISO-NE, it is neither a government agency nor an independent expert, and is due no deference by the Corps under 33 C.F.R. § 320.4(a)(3). ISO-NE is a consortium of electric transmission utilities that serve New England, including CMP. Pursuant to agreements among these utilities, ISO-NE will distribute 100% of the cost of the bulk power components of the MPRP across all electric utilities in New England. Thus, ISO-NE is nothing more than another private utility, and is essentially a co-applicant with CMP in the MPRP application. Accordingly, just like CMP, information submitted by ISO-NE is subject to independent verification by the Corps. *See Greater Yellowstone Coal. v. Flowers*, 359 F.3d 1257, 1269 (10th Cir. 2004) ("the Corps may not issue a § 404 permit unless the applicant, 'with independent verification by the Corps, provides detailed, clear and convincing evidence *proving'* that an alternative with less adverse impact is 'impracticable'")(emphasis in original). Regardless, ISO-NE has also annually downward revised its peak load forecasts, and in fact has estimated even lower and slower load growth over the next decade than CMP. (*See* GridSolar, *Reply Brief of GridSolar LLC*, March 23, 2010, at App. C). Moreover ISO-NE's transmission planning process considers only transmission solutions and its MPRP review expressly did not consider NTAs. Thus, even if it wanted to, the Corps cannot rely upon the ISO-NE's expert analysis with regard to NTAs – it doesn't have one.

4. <u>The MPUC Staff's Examiner's Report Confirms That CMP's NTA Study is Fatally Flawed</u>

While CMP claims that the MPRP will provide reliability at the lowest net present value cost for Maine and the New England region based on the societal cost analysis developed by LaCapra Associates (*CMP Letter*, at 10-11), the MPUC Staff concludes that LaCapra's societal

cost analysis does not "provide a reliable basis for decision" and notes that the underlying assumptions used by LaCapra – including future loads, resources, resource costs and market prices – are "susceptible to challenge" and often turn out to be wrong. (*ER,* at 117.) Indeed, in support of its conclusion that the LaCapra societal cost analysis is unreliable, the MPUC Staff restated the extensive problems with those assumptions as presented by intervenors to the MPUC proceedings (*ER,* at 116-117), and specifically noted that "the NTA analysis should have examined 'hybrid' solutions within sub-regions" and that "[w]ithout considering such hybrids, it is difficult to conclude that any of the alternatives presented is 'optimal.'" (*ER,* at 118.)[5] The MPUC concluded:

> The study is ambitious in its design by attempting to measure both direct and consequential costs associated with each alternative and, thereby, capture the relative effect each would have on total electricity costs, including factors such as locational energy and capacity market prices. The societal cost approach has theoretical merit, and we do not disagree that various transmission and non-transmission alternatives could affect factors such as market prices quite differently. However, the concern presented by this case is that the consequential cost component becomes so large, and is comprised of elements that are widely known to be difficult to accurately forecast (e.g. energy prices), that it becomes unwise to draw a definitive conclusion from the results. This is particularly evident in the LaCapra Study results where: (1) consequential costs range from 80% to 98% of total societal costs; (2) the transmission alternative and "best" NTA are within 3.3% of each other; (3) no sensitivity analysis around "base case" assumptions was provided. With relatively small variances in market prices over the 20-year study period, the study conclusion could be completely reversed. In this sense, the results are not sufficiently "robust" to be relied upon.

(*ER*, at 118-119). The MPUC Staff conclusion fully confirms the extensive problems with the NTA analysis cited by GridSolar in its April comments to the Corps. For this reason alone, the Corps should find that CMP has failed to meet its burden.

[5] This also confirms GridSolar's contention that CMP has failed to evaluate the full range of presumptively available and less environmentally damaging non-transmission alternatives.

In lieu of the LaCapra societal costs analysis, the MPUC staff compared direct costs of the MPRP and LaCapra's non-transmission alternatives, concluding that – even with the inaccuracies noted by GridSolar and the Office of the Public Advocate ("OPA") – "*the best NTA examined would cost substantially less than the MPRP*, but substantially more than Maine's 8% load share." (*ER,* at 119, emphasis added.)[6]

Based on regional cost socialization – a factor that is irrelevant to the Corps 404 analysis – the MPUC staff did not recommend NTAs as a wholesale substitute for the MPRP. (*See ER,* at 119-120.) Nonetheless, even assuming regional cost sharing, the Staff recommended NTA alternatives replace MPRP components for the Mid-coast Loop and the South Portland Loop.[7] Additionally, the Staff concluded that GridSolar "has made a *prima facie* case that the concept it proposes is feasible and potentially beneficial." (*ER,* at 122-123). Thus, the fact that Staff has recommended NTAs in lieu of the MRPR for certain sections, and concluded that the GridSolar Project is feasible and potentially beneficial, is yet further evidence that CMP's NTA analysis is flawed and that non-transmission solutions are in fact practicable and less environmentally damaging than the MPRP.

5. <u>The GridSolar Project Is Not Speculative or Experimental</u>

CMP next contends that the GridSolar Project is speculative, and relies upon comments in the Examiners' Report that the GridSolar Project is "feasible and potentially beneficial" but

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[6] Staff failed to note, however, that the NTA costs used in this estimate are based upon CMP's inflated needs assessment. As explained in GridSolar's prior comments to the Corps, when these flaws are corrected, the total cost of NTAs is less than the MPRP even assuming a 92 percent subsidy by non-Maine ratepayers.

[7] It is our understanding that the South Portland Loop is eligible for regional cost socialization, however, ISO-NE has never ruled on this project component.

that "the design and implementation of the systems, required operational changes and costs/benefits are not sufficiently known for a finding to be made that would allow the GridSolar project to replace the MPRP or any of its sub-components. Moreover, it is unlikely that these issues can become sufficiently known without actual field testing and experience." (*ER,* at 122.)

Lack of experience in Maine does not, however, equate to speculation or uncertainty. Indeed, the two major parties to the MPUC proceedings in the MPRP docket – CMP and the OPA – both acknowledged that the GridSolar Project will work and will provide comparable reliability benefits to those provided by the MPRP. Moreover, the Examiners' Report provides no analysis or support for its conclusion that the concept must be field-tested. In fact, this is contrary to the record. Each of the equipment components of the GridSolar Project is, today, fully operational on many electricity grids in the United States and is working as designed. These components include distributed solar generation, back-up engine-generators, electricity flow meters and communication systems. EnerNOC, among others, has demonstrated the ability to remotely start and stop distributed engine-generators and dispatch customer load in response to signals from a grid operator. ISO-NE, among other grid operators, has demonstrated an ability to perform reliability dispatch on a scale that is orders of magnitude larger than what has been proposed by GridSolar. It is simply not true that the design and installation of the systems and required operational changes are not known. There is no need to field test the operation and performance of equipment, monitoring and control systems and reliability dispatch protocols that are already performing perfectly well in virtually every utility (including the CMP and ISO-NE service territories) in the country.

GridSolar also developed and presented detailed operational models of how distributed solar generation would operate in Maine, the relationship between back-up generation, load response and distributed solar generation necessary to ensure reliability, and the financial costs of the overall system. (*See* GridSolar Ex.'s 3-6). These models and costs were reviewed by the OPA expert, Mr. Fagan, and found to be reasonable. (*See* GridSolar, *Reply Brief of GridSolar LLC*, March 23, 2010, at 17). Mr. Fagan did not contend that the information provided was incomplete or that actual field-testing was required before he could evaluate the costs/benefits of the GridSolar Project. Similarly, CMP did not contend that the information provided was incomplete. Rather, it performed a thorough evaluation of the GridSolar Project and came to different conclusions about the costs and benefits of the GridSolar Project. [8]

Accordingly, CMP's allegation that the GridSolar Project is speculative is wrong and unsupportable.

6. The GridSolar Project and other NTAs are Less Environmentally Damaging

Finally, CMP also alleges that the § 230.10(a)(3) presumption does not apply to the GridSolar project and other NTAs because CMP presumes "there must necessarily be at least some impact to jurisdictional waters from these alternatives." (*CMP Letter,* at 14.) CMP's comments relate solely on two NTAs, PV solar and large-scale generation, which require new construction. Most other NTAs – including efficiency, demand response, smart grid services, battery-storage, and small-scale and on-site backup generation – involve no or minimal new construction and therefore, by definition, will not have any impacts on jurisdictional waters.

[8] *See also*, GridSolar, *Exceptions to the Examiners' Report*, May 7, 2010, at 7-9 (attached as Ex. 27).

Thus, these NTAs unquestionably are entitled to the § 230.10(a)(3) presumption and CMP's failure to even attempt to overcome that presumption should be viewed as an admission that these NTAs are in fact less environmentally damaging.

With regard to PV solar and larger-scale generation, CMP provides no evidence that these alternatives will in fact impact jurisdictional wetlands. Instead, CMP merely speculates that given Maine's landscape "it is *improbable* that GridSolar's, or any other, alternative to MPRP could be built without any impacts to wetlands or other special aquatic sites." (*CMP Letter,* at 13, emphasis added). As noted before, speculation is *per se* inadequate to meet the applicant's LEDPA obligation. Since PV Solar and larger scale distributed generation are not water dependent and can be located away from jurisdictional waters, the § 230.10(a)(3) burden applies unless CMP can clearly demonstrate otherwise. Here, CMP has not only failed to meet this burden, it utterly ignores and fails to refute the evidence previously submitted by GridSolar demonstrating that because of its modular nature and small-scale distributed design, PV solar and demand response/backup generation (much of which already exists, *see* GridSolar, *Supplemental Filing*, Sept. 8, 2009 at 7-12 and GridSolar, *Second Supplemental Filing*, Oct. 27, 2009 at 34-38)[9] can be installed entirely in upland and brownfield locations without any impact on jurisdictional waters. (*See Comments of GridSolar, LLC*, at 25 and 43-44). Accordingly, it remains CMP's burden to clearly demonstrate that an NTA that includes PV solar or larger-scale generation facilities would be more environmentally damaging than the MPRP.

7. Conclusion

For the reasons above, GridSolar respectfully requests that the Corps of Engineers deny the CMP's application for a 404 permit for the MPRP due to CMP's failure to clearly demonstrate

that the MPRP is the least environmentally damaging practicable alternative.

Sincerely,

Steve Hinchman, Esq.
Attorney for GridSolar, LLC

Enclosures: Exhibits 26 – 27

Cc: David Dominie, Central Maine Power
James Frick, Maine Chapter of the Sierra Club
Ed Friedman, Friends of Merrymeeting Bay
Rand Stowell, Friends of Maine Mountains

[9] Submitted as GridSolar Ex.'s 4 and 5, respectively.