

STATE OF MAINE DEPARTMENT OF CONSERVATION LAND USE REGULATION COMMISSION

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Application for Development of
Maine Mountain Power LLC
Black Nubble Wind Farm Application
Rezoning Application ZP 702

PRE-FILED TESTIMONY OF PETE DIDISHEIM NATURAL RESOURCES COUNCIL OF MAINE

I. Introduction and Summary

The Natural Resources Council of Maine strongly supports Maine Mountain Power's (MMP) application to build a 54-megawatt (MW) wind power project on Black Nubble Mountain. The Black Nubble Wind Farm would provide a meaningful contribution to the generation of clean power in Maine, reducing our dependence on fossil fuels and helping to address the threat of climate change. Protection of Redington Pond Range from wind power development, as agreed to by MMP as part of the revised application, would be a very significant conservation achievement. For the past two years, NRCM has urged parties on all sides of this project to reach agreement on a compromise Black Nubble-only solution, such as is now before the Commission. The revised application strikes the right balance, as demonstrated by the endorsement it has received from a broad-based coalition of more than 22 organizations¹ – the most to ever endorse a wind power project in Maine. NRCM firmly believes that the project is consistent with LURC's evaluation criteria, is in the best collective interests of the people of Maine, and deserves to be approved by the Commission.

On six different occasions during this proceeding (Zoning Petition ZP 702), NRCM has provided comments in support of a Black Nubble-only project.² Our position in support of a Black Nubble wind farm is well established, and we will endeavor not to repeat arguments here that NRCM has already entered into the record. We do, however, offer the following summary observations which we believe provide important perspective on remaining issues, and our testimony addresses each of these in further detail:

The Black Nubble Project would have very little impact within LURC's PM-A zone: The Black Nubble Wind Farm is expected to result in only 64 acres of habitat impact above 2700' elevation. This amounts to less than 0.05% of the 139,201 acres of land above 2700' in Maine which is zoned by LURC as a Mountain Area Protected Subdistrict (P-MA).

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¹ Exhibit A. These organizations represent more than 75,000 people, more than 5,000 Maine businesses, more than 600 congregations and 15 Maine colleges and universities.

² Initial Comments submitted 5/17,06; Pre-filed Testimony Submitted 7/14/06; Oral Summary delivered 8/4/06; Post hearing comments submitted 8/14/06; Deliberative Session Comments 1/24/07; Comments in support of MMP request to re-open public record; and at LURC Meeting to decide on opening hearing record 6/6/07.

- Impacts from logging in PM-A zones greatly exceed the impact of this project: Since 1974, more than 21,300 acres of forestland have been harvested in LURC's PM-A zone, with more than 4,550 acres cut in Redington Township alone. Although project opponents express concerns about the 64 acres of PM-A habitat that would be cleared for the Black Nubble project, these organizations did not object to Forestry Operations Permits for extensive harvests approved by LURC in PM-A zones near the project area, including: a permit to cut 1,900 acres on Black Nubble with mature stands of 80+ year-old trees, a 700-acre harvest on Crocker Mountain, an 800-acre harvest on the northern slopes of Spaulding and Mt. Abraham, or a 1,152-acre harvest on Mount Abraham.³
- Black Nubble has no documented habitat for the Northern Bog Lemming: Unlike at Redington Pond Range and the Kibby Mountain wind power project site, there is no evidence that Black Nubble is a habitat for the Northern bog lemming – a species of significant concern when the original Redington Wind Farm proposal was considered by LURC.
- The Black Nubble project would not cause a significant threat to Bicknell's Thrush: The potential loss of 64 acres of Bicknell's Thrush habitat on Black Nubble amounts to only 0.02% of the estimated 336,373 acres of such habitat in the U.S. Any direct mortality impact would be small in the context of an estimated U.S. Bicknell's Thrush population of 40,000. The most serious threats to Bicknell's Thrush are the loss of wintering grounds in the Caribbean, global warming which could virtually eliminate the species from the U.S., mercury pollution which interferes with reproduction, and acid rain that causes habitat loss.
- Black Nubble does not have the natural resource values of Redington Pond Range: Although Redington Pond Range is one of the most valuable mountains in Maine that is not yet protected, Black Nubble does not fit in this category. The inherent difference in natural resource values was well demonstrated in the Appalachian Mountain Club's (AMC's) prefiled testimony for the original Redington Wind Farm hearings, which specifically mentioned the ecological and natural resource values of Redington Pond Range in 32 separate passages, yet referred to Black Nubble only once.⁴
- Black Nubble does not have the recreational values of Redington Pond Range: Redington Pond Range is a significant recreation resource because it is one of only 14 peaks in Maine above 4,000-feet, which makes it a destination for hikers seeking to summit Maine's highest mountains.⁵ Redington is identified in AMC's *Maine Mountain Guide* of 200 summits of significance for hiking in the state.⁶ Black Nubble, however, is not mentioned anywhere in AMC's *Maine Mountain Guide*, there is no established trail on the mountain, and it is not one of "New England's Hundred Highest," which is another reference list produced for hikers by AMC to identify the most significant mountain hikes in the region.

³ See Exhibits C and D.

⁴ See Exhibit B.

⁵ A marked hiking trail ascends to the summit Redington, where a sign-in log is available for hikers to register that they have completed this 4,010' climb. AMC receives applications to join the "Four Thousand Footer Club" and the "New England Highest Hundred Club" from hikers who have completed these hikes.

⁶ Maine Mountain Guide, Appalachian Mountain Club, Boston Massachusetts, 8th Edition, Globe Perquot Press.

- The Black Nubble Project would provide significant clean energy benefits: The 54 MW Black Nubble Wind Farm would produce more clean, renewable energy annually than all but five of Maine's 102 hydropower dams. Operation of the Black Nubble Wind Farm over a 20-year period would be the equivalent of replacing 3,000,000 traditional incandescent light bulbs with high efficiency compact fluorescent lights. Approval of the project would be consistent with state policy which supports wind power development. In contrast, denial of the application would be a set-back for Maine's efforts to increase renewable power generation.
- Fossil fuel use, not wind power, is the major cause of damage to mountains: All forms of energy generation have impacts, and NRCM fully recognizes that the Black Nubble Wind Farm would have visual impacts for those who do not want to see wind turbines in Maine's mountains. The project would involve road construction on mountain slopes, which would cause erosion and some habitat loss. But the impacts of this project should be considered within the larger context of environmental harms caused by our existing dependence on coal, oil, and natural gas. Maine's mountains currently are experiencing impacts from fossil fuel use, in the form of habitat degradation caused by acid rain, toxic pollution, and visual impacts due to ozone haze. Over the long-term, Maine's mountains are expected to experience widespread habitat loss and species impacts due to climate change.⁷ Maine's electricity consumers get more than 12% of their electricity from coal,⁸ including from coal that has been mined in West Virginia and is burned at the Merrimack Plant in Bow, New Hampshire.⁹ It is thus relevant to consider impacts associated with coal use. More than 470 mountains have been destroyed in West Virginia, Virginia, Kentucky, and Tennessee through mountain-top removal of coal.¹⁰ According to the U.S. EPA, mountaintop coal removal has caused the destruction of more than 800 square miles of mountains and 1,000 miles of streams, with widespread impacts on wildlife, fish, and terrestrial habitat.¹¹ At its current rate, mountaintop removal of coal will cause a projected loss of more than 1.4 million acres in Appalachia by 2020.

With this information in mind, and for reasons provided below and in NRCM's testimony that already is part of the public record, we urge LURC to approve MMP's application to construct a 54 MW wind power project on Black Nubble.

II. <u>Biographical Information</u>

Since 1996 I have served as the Advocacy Director for the Natural Resources Council of Maine. I provide overall strategic direction and management of NRCM's advocacy work on land conservation, north woods, energy, global warming, watershed protection, and toxics. I hold a

⁸ Maine PUC, Mitchell Tannenbaum, Presentation to Wind Power Task Force,

⁷ Northeast Climate Impacts Assessment (NECIA), Confronting Climate Change in the U.S. Northeast, July 2007, Union of Concerned Scientists.

http://www.maine.gov/doc/mfs/windpower/meeting_summaries/080307_summary_files/Wind%20Power%20in%20 Maine-Mitch.ppt

⁹ Platt's CoalDat Database; Clean Air Task Force. New England power plants burned 9,179,280 short tons of coal in 2006, mined in West Virginia, Pennsylvania, Nevada, Ohio, Colorado, Colombia, Venezuela, and Indonesia. The Brayton Point power plant in Massachusetts burns an average of 9,000 tons of coal/day.

¹⁰ See <u>www.ilovemountains.org/memorial/</u> to see a memorial identifying the 470 mountains destroyed by mountaintop removal, with stories, photos, maps, videos and interviews of local residents to tell the stories of those mountains and nearby communities.

¹¹ <u>http://www.epa.gov/region3/mtntop/index.htm</u>

Master's degree in public administration from Harvard University's Kennedy School of Government, and a Bachelor's degree in biology and environmental studies from Williams College. I previously served as the Chief of Staff for Congressman George E. Brown, Jr.; Deputy Chief of Staff of the U.S. House of Representatives Committee on Science, Space and Technology; and Special Assistant for Science and Technology to the U.S. Secretary of Energy, Hazel R. O'Leary. I have reviewed and helped develop NRCM's organizational position on the Mars Hill, Kibby Mountain, Redington, Stetson, and Black Nubble wind power proposals. I have visited each of these project sites, including on bird survey trips with Dr. Jeffrey Wells to both Redington Pond Range and Black Nubble. I am a member of Governor Baldacci's Task Force on the Development of Wind Power in Maine.

III. <u>Background</u>

Over the past 15 years, NRCM has closely followed every proposed wind power project in Maine and we have been actively involved in many of the major land conservation projects that have taken place within Maine's interior mountains and remote forestlands. We also have monitored wind power development elsewhere in New England. We believe that wind power is the most cost-effective, utility-scale renewable energy technology ready for expanded development in New England. We believe that the environmental benefits from wind power are real and meaningful, and that wind power development is a necessary part of a comprehensive energy strategy aimed at reducing our reliance on fossil fuels, reducing greenhouse gas emissions, and curbing mercury pollution.

NRCM also strongly supports land conservation in Maine's North Woods, interior mountains, and areas with remaining remote resource values. We do not believe that concern about global warming trumps all other considerations. NRCM opposed the original Redington Wind Farm application because we believe that Redington Pond Range has rare features that make it an inappropriate site for wind power development. Redington lies within a large contiguous area above 2700 ft. elevation, has a mapped presence of an exemplary subalpine spruce-fir forest, and includes habitat for the endangered Northern bog lemming. Black Nubble does not have comparable features, which is why we conclude that it is an acceptable site for wind power.

In March 2007, MMP approached NRCM to discuss amending their application to a singlemountain (Black Nubble) project. After two months of negotiations which covered a broad range of approaches, we finalized a Restriction Agreement that would provide permanent protection from wind power development for the 517 acres on Redington Pond Range that are owned by the developer, as part of a revised project application that would only propose construction of turbines on Black Nubble. NRCM holds the restriction agreement in escrow, and will record it with the Registry of Deeds in Franklin County if a Black Nubble project is approved and construction begins. This agreement would provide a level of protection for Redington Pond Range that would not be available otherwise.

IV. Consistency with LURC Criteria for Utilization of Mountain Resources

LURC's Comprehensive Land Use Plan notes that "Mountains and the scenic, natural, recreational, economic and other values they possess are a limited resource in Maine."¹² The CLUP further states that "In light of the limited supply of mountain resources and their values, it is unlikely that all such areas will be considered suitable for rezoning and associated

¹² CLUP, p. 58.

development by the Commission."¹³ But the CLUP clearly envisions utilization and development of some mountain resources, including for energy development. The CLUP supports the development of indigenous renewable resources to increase the state's energy self-sufficiency, and discusses the likely development of wind power.

The CLUP recognizes that the Commission must strike a balance between utilization of the resources of the jurisdiction and protection of those resources. To guide this balancing effort, LURC is directed to "identify and protect high mountain resources with <u>particularly high natural resource values or sensitivity</u> which are not appropriate for most development."¹⁴ (emphasis added). Many intervenors in opposition to the original application believed that Redington Pond Range met the definition of a high mountain resource with "particularly high natural resource values," and thus argued that construction of a wind farm on such a mountain would be "setting the bar too low."¹⁵ NRCM agreed with that position, which is why we opposed the original application and worked to negotiate a Restriction Agreement for Redington Pond Range that would preclude wind power development on that mountain. (Exhibit F).

By the same token, we believe that there is no compelling evidence that Black Nubble meets the test of being a high mountain resource with "particularly high natural resource values or sensitivity" that would warrant it being on a list for priority protection by LURC. Supporting this conclusion, AMC's pre-filed testimony from July 2006 includes a list of 20 mountains in Maine that AMC concludes are "inappropriate for windpower development," based on the organization's analytical approach for evaluating the suitability of wind power sites. Redington Pond Range is on that list of 20 inappropriate sites; Black Nubble is not.¹⁶

The reasons for this are evident from AMC's pre-filed testimony in opposition to the original application, which includes 32 passages about the extensive natural resource values of Redington Pond Range, but mentions Black Nubble only once (see Exhibit B). Unlike Redington Mountain, Black Nubble is comprised of fragmented forest that has been harvested within the past 15 years. Black Nubble is not at the center of either the unfragmented forest or roadless area mapped by AMC. Black Nubble is not a significant destination for hiking, as demonstrated by its complete absence from AMC's *Maine Mountain Guide* (a manual on 200 of the most significant summits in the state) and its absence from AMC's "New England Highest Hundred" list.

Black Nubble also does not have habitat or ecological values comparable to those on Redington Pond Range (discussed further below). Based on these considerations, Black Nubble is not a mountain with particularly high natural resource values that require protection. Accordingly, NRCM believes that construction of a wind farm on Black Nubble is fully consistent with LURC evaluation criteria and policies for utilization of mountain resources for such a purpose.

¹³ CLUP, p. 61.

¹⁴ CLUP, p. 138.

¹⁵ See for example, ZP 702, Pre-filed testimony of Appalachian Mountain Club, Dr. David Publicover, 7/14/06: "If LURC's Comprehensive Land Use Plan and Land Use Districts and Standards are intended to protect any high mountain areas from development, they are intended to protect an area as significant as Redington Mountain." P. 24. ¹⁶ ZP 702, Pre-filed testimony of Appalachian Mountain Club, Dr. David Publicover, p 21.

V. <u>No Undue Adverse Impact on Existing Resources and Uses</u>

Pursuant to 12 M.R.S.A §685-A(8-A), the applicant is required to demonstrate that the proposed project will have "no undue adverse impact on existing uses and natural resources." We believe that MMP has met this requirement, based on our evaluation of the specific natural resources that have been a primary concern during this proceeding.

<u>No undue adverse impact to Northern Bog Lemming</u>: Opponents of the original Redington Wind Farm expressed paramount concern about the potential impact of the project on the Northern bog lemming, a state-listed threatened species that had been observed on Redington Pond Range. Because there is no documented evidence of Northern bog lemming habitat on Black Nubble, this potential adverse impact has been eliminated as a result of the revised application.

No undue adverse impact on Bicknell's Thrush: Opponents of the original Redington Wind Farm claimed that the project would have a major impact on the Bicknell's Thrush, which has been identified as a declining bird species in the northeast and a high priority for habitat conservation. To assist us in evaluating the seriousness of this risk, NRCM hired a nationallyrecognized expert, Dr. Jeffrey Wells. We asked Dr. Wells to evaluate the potential impact of the Black Nubble Wind Farm to Bicknell's Thrush, and to assess these risks within the context of the full range of threats to the Bicknell's Thrush. Based on his professional experience and field visits to both Redington Pond Range and Black Nubble, Dr. Wells concludes that the habitat loss and potential direct mortality impacts of the Black Nubble Wind Farm would not be significant. Specifically, the 64 acres of habitat that would be cleared amounts to only 0.02% of the estimated 336,373 acres of such habitat in the United States. Any direct mortality impact would be small in context of the estimated U.S. Bicknell's Thrush population of 40,000. Dr. Wells' testimony, submitted separately, documents that the most serious threats to Bicknell's Thrush are: 1) the loss of wintering grounds in the Caribbean, 2) the potential habitat impacts caused by global warming, which could virtually eliminate the species from the U.S. by the end of this century, 3) mercury pollution which interferes with reproduction, and 4) acid rain that causes the loss of high alpine balsam-fir dominated forest preferred by the species.

<u>No undue adverse impact on habitat above 2700-feet (P-MA)</u>: The Black Nubble project would involve 64 acres of clearing above 2700-feet. Only 42.5 acres would be permanently disrupted, because 21 acres would be allowed to re-vegetate. This amounts to less than 0.05% of the 139,201 acres of land above 2700' in Maine which is zoned by LURC as a Mountain Area Protected Subdistrict (P-MA).

Opponents of the project have implied that P-MA zones are protected from human disturbance, but this is not accurate. Widespread timber harvesting has been approved above 2700-feet elevation throughout Maine's mountains.

NRCM has determined from LURC records that 209 permits and permit amendments have been approved for timber harvesting in P-MA subdistricts since 1974.¹⁷ These Forestry Operations Permits (FOP's) have authorized harvests of at least 21,373 acres in P-MA subdistricts (Exhibit

¹⁷ Amendments often reflected changes in harvesting date or ownership, but also included additional proposed harvests. Consolidating all amendments, it appears that there have been 129 unique approved harvest operations.

C).¹⁸ A substantial amount of this cutting has occurred in the general region of the proposed project, with at least 2,582 acres cut in Mount Abram Township and 4,550 acres harvested in Redington Township. (Examples provided in Exhibit D). Thousands of acres of forestland have been harvested around Black Nubble and Redington Pond Range, causing a level of habitat disruption far in excess of the 64 acres that will be cleared as a result of this project.

NRCM was unable to find a single instance where any of the organizations that oppose Black Nubble objected to a forestry operations permit in a P-MA zone, even though approved permits included the following features:

- Georgia-Pacific received a permit to harvest 1,900 acres on Black Nubble. The harvests included mature stands 80+ years in age.
- Hudson Pulp and Paper received a permit to harvest 1000 acres in Redington Township. The harvest area was comprised of old growth fir.
- St. Croix Pulpwood Corp/Georgia Pacific received a permit for a commercial clearcut on the western slope of Crocker Mountain, near the Appalachian Trail.
- Dallas Corporation was issued a permit to harvest 700 acres on the western side of Crocker Mountain.
- Scott Paper received a permit to harvest 800 acres on the northern slopes of Spaulding and Abraham mountains, including mature stands varying in age from 70 to 90+ years.
- Mead Corporation received a permit to harvest 1,125 acres on Mount Abraham, including on both sides (500 ft distance) of the Appalachian Trail.

All of these harvests were above 2700 feet. If these thousands of acres of harvesting on and near Black Nubble, Redington Pond Range, North Crocker, Mount Abraham, and the Appalachian Trail were approved and not ruled to cause undue adverse impact, then certainly 65 acres of clearing above 2700 feet on Black Nubble must also meet the definition of "no undue adverse impact." This conclusion is reinforced by looking more closely as the actual forested habitat that remains on Black Nubble, and how the project would be situated on the mountain.

As shown in Exhibit G, 10 of the proposed 18 turbines will be located in or adjacent to areas already disrupted by logging, and only eight turbines will be within unfragmented forest. This is a wholesale difference from Redington, where all 12 of the proposed turbines would have been within unfragmented forest. Also unlike Redington, the unfragmented forest on Black Nubble is not ranked by Maine's Natural Areas Program as an "Excellent" example of the rare (S3) subalpine fir heart-leaved birch community type. The top of Redington Pond Range is one of only five documented examples of this habitat in Maine that has been ranked as "Excellent" (Exhibit E). Black Nubble, in contrast, has received a (BC) "Good or Fair Viability" rating from MNAP. Approximately 28 acres of the 64 acres that will be cleared on Black Nubble will be of land that already has been disrupted by logging (as a result of a previously approved forestry operations permits) and only 36 acres will be within currently unfragmented forest. The Maine Natural Areas Program has estimated that half of the 64 acres of clearing would be within the fir heart-leaved birch subalpine forest community. This would amount to an impact on only 0.07%

¹⁸ The actual total of acres harvested above 2700 feet in Maine is likely much higher, since 63 (30%) of the permit documents in LURC's files did not include acreage information. Data was collected at LURC headquarters. Additional information may be retrievable from LURC district offices, but NRCM staff efforts to identify further FOP files were not successful.

of the approximately 45,000 acres of documented forest habitat of this community type in Maine.¹⁹

<u>No undue adverse impact on existing uses:</u> Prior to its purchase by Redington Mountain Windpower, the primary use of the 487 acre Black Nubble parcel was timber harvesting. Exhibit F reveals the extent of harvesting operations above the 2700-foot contour on Black Nubble. Timber operations are an allowed use, by permit, but the applicant has made clear that they have no plans to harvest timber on the 423 acres not affected by the project.

As described above, Black Nubble is not a destination for recreation purposes, so it would not be accurate to conclude that recreation at the project area is an existing use that might be adversely affected. The project will be visible from some hiking trails within 15 miles of the project, which could constitute an impact on an existing use. The task of assessing the level of impact from the revised project is still not an easy one for the Commission. As demonstrated at the public hearing on the original Redington Wind Farm, visual impacts are in the eye of the beholder: some members of the public were deeply troubled about the prospect of wind turbines on Maine's mountains, while others felt that such a sight would give them hope about our commitment to develop clean energy. The Commission heard from four different visual impact experts, providing four different opinions about the level of scenic impact that would be caused by the original project, ranging from "no adverse impact" to "severe adverse impact."

There can be no question that the removal of 12 turbines from Redington Pond Range significantly reduces that impact. In testimony submitted by the consolidated opponents, Jean Visserling presented nine factors that may affect the level of impact.²⁰ Based on information in her testimony, and data from Terrance DeWan in the original and revised applications, it is possible to demonstrate the reduced visual impact from the Black Nubble project using her criteria.

- **Distance from project**: The closest turbine to the AT has changed from one mile to three miles. This change is not merely numeric. It is a change from turbines being on the cusp of the "foreground," where objects can dominate the visual field, to solidly in the middle-ground, where individual elements become blended together.
- <u>View duration</u>: Previously, the project was visible for approximately three miles of the AT, including a total of 1/2 miles of views from the middle-ground. The Black Nubble project would be visible for less than half that duration, or 1/5th of a mile, some of which would be filtered through trees.
- <u>Angle of view (direct or to the side</u>): There remains one prominent view of the project "directly ahead" (at Saddleback Junior) but others remain to the side. Several direct views of the project have been eliminated or substantially reduced (e.g. Sugarloaf, Sugarloaf Cirque, Orbeton Ledges).

¹⁹ See Exhibit E; Maine Natural Areas Program letter to LURC, from Raquel Goodrich to Marcia Spencer Famous, 8/21/07.

²⁰ Pre-filed testimony by Jean Visserling, ZP 702, July 2006

- **Panoramic vs. narrow view**: Views of the project are considerably more narrow. From the four visible locations, the project occupies half or less than half the space on the horizon compared to the original. Only in one case is the view of the project greater than 20° out of 360° (Saddleback Junior, 22°).
- <u>Scenic quality of the view</u>: There is obviously no change in the scenic quality of this region. It is worth noting that of the views chosen by Visserling for simulation, several of them will now have *no* visible turbines.
- **Focal point within a view**: There is no single focal point for viewers along this stretch of the AT; at different points, different mountain forms may become more or less focal.
- <u>Number of turbines</u>: The number of turbines has decreased by 40%.
- <u>Viewer expectations</u>: Viewer expectations for hiking along the AT have not changed, although the significant changes in distance to turbines, and narrowness and duration of the view of the project, mean that the project is far less likely to interfere with expectations of scenic views. It is clear that AT hikers expect to see some evidence of human development or landscape change, because such evidence is apparent along the entire 2,300 miles of the trail.
- <u>Scale</u>: There is no change in the relative scale of the wind turbines.

Application of these criteria lead NRCM to conclude that the scaled-back project significantly reduces overall visual impacts, and that the project as a whole does not cause "undue adverse impacts."

The National Park Service and some intervenors believe that the Black Nubble project (at three miles distance at its nearest point) is too close to the AT. This implies a protective scenic buffer of four miles (or greater) around the AT. If such a protective buffer did exist, of four miles on each side of the AT, it would be the equivalent of zoning nearly 1.5 million acres of Maine off-limits for wind power, or the equivalent of nearly two times the size of Rhode Island. Clearly, such a buffer does not exist, and NRCM does not believe that LURC should establish such a buffer in a de facto fashion through a determination in this proceeding. A decision of that magnitude must involve input from policymakers, land owners and the public.

VI. Consistency with "Demonstrated Need" Criteria

NRCM believes that the Black Nubble project clearly and unequivocally meets LURC's "demonstrated need" criteria²¹. We do not believe that there should be any significant debate about the fundamental question of whether Maine has a demonstrated need to reduce our dependence on fossil fuels through increased generation of renewable energy. Maine law requires a 10% increase in renewable energy by 2017, a goal which likely cannot be achieved except through wind power.²²

²¹ 12 MSRA §685-A(8-A)

²² 35-A MRSA §3210

LURC includes a number of specific factors that can be considered when evaluating the "demonstrated need" criteria.²³ We believe that "demonstrated need" is particularly well satisfied through the following four of these factors:

1) **Public Benefit**: The Maine Wind Energy Act finds that it is "in the public interest" to develop wind power²⁴. The Black Nubble Wind Farm is expected to generate 142,000 MWh of electricity annually, which is equivalent to the electricity utilized by an estimated 21,500 Maine homes. Over a 20-year operation period for the project, this amount of clean power generation is equivalent to replacing 3,000,000 traditional incandescent light bulbs with energy saving compact fluorescent lights. In addition to meeting state policy and statutory requirements, this level of zero-emission clean power generation would be a significant public benefit for human and environmental health, as it would displace fossil fuel generation and reduce air pollution (including carbon emissions) accordingly.

2) <u>Need for Goods and Services & Projected Customer Base</u>: Maine and consumers who are part of the integrated electrical grid (NEPOOL) need more clean, renewable power. Currently, approximately 60% of the electricity generated in New England comes from fossil fuels. Renewable Portfolio Standard (RPS) policies in Maine, Massachusetts, Connecticut, Rhode Island and New Hampshire all are aimed at reducing our dependence on fossil fuels and spurring renewable energy generation. The regional demand for renewable energy credits currently exceeds the supply, and is expected to for many years. This means that the power from Black Nubble will have a strong customer base. A growing number of Maine businesses and residents are interested in purchasing renewable energy that has been generated in Maine.

3) **Economic Benefit**: As outlined in more detail by other parties, the project will bring direct economic benefits to the community and the region. This includes significant property tax revenue on an annual basis, project investments in Maine totaling many millions of dollars, and direct employment during and after construction (as well as "multiplier effect" spending on food and lodging).

4) **Dependence on Site-Specific Natural Resources**: The fundamental reality of wind power projects is that they must be developed in locations where there is a strong wind resource. Black Nubble has a strong wind resource. Although other areas in Maine also have strong winds, it is a highly complex task to find the right combination of wind speed, proximity to transmission lines, and site suitability. Black Nubble provides the site-specific resource that can result in an economically viable project.

VII. Benefit of Protecting Redington Pond Range

In evaluating the Black Nubble application, the Commission should fully consider the additional level of protection that would be provided for Redington Pond Range as part of the revised project. NRCM has negotiated a binding Restriction Agreement with Maine Mountain Power and Redington Mountain Windpower LLC that would permanently preclude windpower development on the last remaining 4,000' peak in Maine (other than Sugarloaf) that is not

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²³ Clarifying the Rezoning Criterion of "Demonstrated Need," Maine Land Use Regulation Commission, April 1, 2004.

²⁴ 35-A MRSA §3401-3404.

protected. The agreement (Exhibit F) includes the following specific restriction: "Redington Mountain Windpower and Maine Mountain Power agree not to develop, seek permit approvals for, build or operate any wind power project or related assets on the Redington Property." The agreement would be recorded in Franklin County and would become binding and enforceable with the commencement of operations of a Black Nubble project.

This is a meaningful level of additional protection on Redington Pond Range, which we believe serves as relevant mitigation for project impacts from the Black Nubble project. Although 64 acres of land would be cleared on Black Nubble to construct a wind power project, 517 acres of ecologically-sensitive land on Redington Pond Range would receive permanent protection from wind power development. Given the extensive testimony in the record about the ecological, scenic, natural resource, and recreation values of Redington Pond Range, NRCM believes that protection of the Redington ridgeline would be an important achievement.

VIII. Conclusion

Dr. James Hansen, NASA's top climate scientist, believes that human society has no more than 10 years to level off the production of greenhouse gases if we are to avert a "tipping point" of global warming impacts which would be difficult to reverse. Hansen believes that our carbon emissions must be cut to half or less of their current levels by 2050. Such reductions will be difficult, but essential to preventing the climate scenarios projected by the Northeast Climate Impacts Assessment and others.²⁵ NRCM recognizes that a Black Nubble project will have impacts, but we also recognize that our current forms of energy generation and use are causing widespread harm, within Maine and far beyond our borders.

The impacts of mountaintop removal for coal should be kept in mind when we think about the potential impacts of this project. More than 470 mountains have been destroyed in Appalachia from this technique, causing widespread impacts to wildlife, communities, and the environment. (Appendix H). In accompanying testimony from our technical expert, Dr. Jeffrey Wells chronicles a long list of threats to threatened bird species from coal mining, U.S. oil and gas drilling, and Canadian oil and gas drilling – including the loss of 350,000 acres of habitat in northeastern Alberta alone.

NRCM did not support the original Redington Wind Farm proposal, but we strongly support the Black Nubble compromise. Compared with the original project, the Black Nubble Wind Farm will result in less road building, less habitat fragmentation, reduced risks to threatened species, and reduced visual impacts – yet Maine would still have the benefits of a significant new source of clean renewable power. Ecological impacts would be reduced because Black Nubble contains no documented habitat for the Northern bog lemming, and the 35,000 acre roadless area mapped by AMC would not face any new disruptions since Black Nubble lies outside of this contiguous tract.

A careful examination of the facts shows that the revised Black Nubble project would result in significantly reduced impacts across all relevant criteria. NRCM regrets that the project has not received support from AMC and Maine Audubon, organizations that we respect and work with regularly. But in this case, we do not understand how these groups can reconcile their opposition

²⁵ NECIA report. (According to the NECIA report, reducing emissions to half their current levels would avoid the climate impacts not only under the "higher-emissions" scenario, but most of the impacts from the similarly unpleasant "lower-emissions" scenario.)

to Black Nubble with their endorsement of the Kibby Wind Farm,²⁶ a project that NRCM also strongly endorses and believes meets all LURC evaluation criteria, but which would have significantly greater site impacts than would Black Nubble.

The positions of the National Park Service and Appalachian Trail Conservancy (ATC/MATC) are more readily understood, because of their missions to protect the viewshed of the Appalachian Trail. But Maine's Land Use Regulation Commission has a broader mission: making the best decision with regard to the collective interests of the people of Maine, which includes landscape conservation and also clean energy, energy security, and responses to the threat of global warming.

Public opinion polls indicate that Maine people strongly support the development of wind power as a way of reducing our dependence on fossil fuels.²⁷ Maine's energy policies strongly support the development of wind power. NRCM firmly believes that the Black Nubble Wind Farm strikes the right balance. We respectfully urge LURC to approve the application.

²⁶ NRCM-Maine Audubon-AMC press release endorsing Kibby Wind Farm, June 5, 2007.

²⁷ According to a Spring 2007 poll by Pan Atlantic Group, 85.1 % of Maine people support wind power development in Maine, while only 11.1 % oppose. Exhibit A.