

The Black Nubble Wind Farm

## **Section 3: Financial Capacity**

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## 1.0 Source & Use of Funds

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Total project costs are projected to be approximately \$110 million, which is about \$6.1 million per wind turbine generator, or \$2.0 million per installed megawatt capacity. The projected source and use of funds are summarized in the table below.

<b>Projected Source of Funds:</b>	<b>\$ Million</b>
Equity (Mission Wind Maine)	\$ <u>110</u>
<b>Total Source of Funds</b>	<b>\$<u>110</u></b>

<b>Projected Use of Funds:</b>	<b>\$ Million</b>
Wind Turbines (including transportation)	<u>55</u>
Wind Turbines Installation	<u>4</u>
Foundations	<u>6</u>
Transmission Lines	<u>5</u>
Roads	<u>11</u>
Electrical and Transformers	<u>7</u>
Other / Balance of Farm	<u>3</u>
Interconnection	<u>10</u>
Development	<u>6</u>
Soft Costs	<u>3</u>
<b>Total Use of Funds</b>	<b>\$<u>110</u></b>

Development and balance of plant costs include the mitigation measures, underground cable routing, wetlands avoidance, visual impact mitigation, minimizing clearing, pre-permitting and post permitting studies, site stabilization and erosion control, stormwater management, and revegetation measures.

Edison Mission Group (EMG), through Mission Wind Maine (MWM), one of EMG's project subsidiaries, and Endless Energy Corporation have established Maine Mountain Power, LLC (MMP) as the project company which will finance and own the Black Nubble Wind Farm Project. In addition, Mission Wind Maine and Endless Energy Corporation have entered into a joint development agreement pursuant to which

development of the Black Nubble Wind Farm Project is to be completed.

## **2.0 Edison International Background**

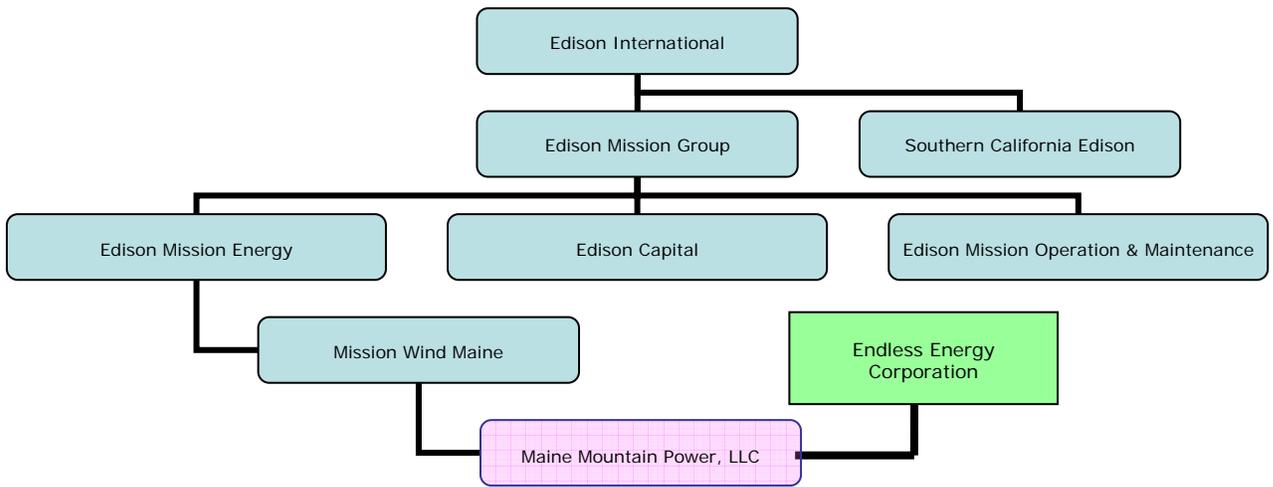
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The Edison Mission Group and Mission Wind Maine are members of the Edison International family of companies. Edison International is one of the leading energy companies in the United States. Edison International is publicly traded on the New York Stock Exchange, and has approximately \$36 billion in total assets, and generated over \$1.1 billion of net income during 2006. Edison International employs over 15,000 people, and owns electric power generation assets totaling about 14,400 MW of capacity. Edison International's principal operating subsidiaries include Southern California Edison Company and the Edison Mission Group. The Edison Mission group includes Edison Mission Energy and Edison Capital:

- *Southern California Edison* is one of the largest regulated electric utilities in the country, serving about 13 million people across its 50,000 square mile service territory. Southern California Edison has over 1,000 MW of wind power under contract. Southern California Edison currently serves about 17% of its customers' power supplies from renewable resources, and is among the largest providers of wind energy among utilities in the United States.
- *Edison Mission Group* manages the competitive power generation business of Edison International, and includes operating companies engaged in independent power development, generation, and operations, as well as power marketing and trading. Edison Mission Group's two main subsidiaries are:
  - *Edison Mission Energy* is among the nation's foremost owners and operators of independent power generating facilities, with \$7.3 billion in assets, and about 9,500 MW of generation capacity, primarily in the United States. As described below, Edison Mission Energy is among the leading developers, owners and operators of wind energy generation projects in the United States.

- *Edison Capital* provides capital and financial services focusing primarily on investments related to the production and delivery of electricity. Edison Capital has \$3.2 billion in assets, including electric generation, electric transmission and distribution, transportation, telecommunications and affordable housing.

Edison Mission Operations and Maintenance (“EMOM”) Services, another member of the Edison Mission Group, has capability and experience in managing and operating wind energy projects, and plans to provide such services to the Black Nubble Wind Project.



### 3.0 Wind Energy Experience

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Edison Mission Group (EMG) is focused on new investments in U.S. energy projects, including wind energy projects in particular. EMG’s goal is to invest well in excess of \$1 billion in new wind energy projects over the next 5 years.

Edison Mission Group invested in its first wind energy project in 1998, and to date has invested in 15 wind energy projects totaling over 700 MW (gross), with several additional projects prepared to commence construction. Edison Mission Group’s role in these projects includes project development, construction financing, investment and equity ownership, construction management, O&M services, and operations and management expertise. Edison Mission Group’s wind energy portfolio deploys a wide variety of different turbine technologies, and during 2006 achieved a strong operating availability performance of approximately 96%.

The following table provides an overview of Edison Mission Group’s national wind energy portfolio, which totals 316 MW, enough to power more than 200,000 homes:

Project Name	Location	Generation Capacity (MW)	EMG’s Equity Interest
<u>Wildorado</u>	<u>Texas</u>	<u>161</u>	<u>99%</u>
<u>Sleeping Bear</u>	<u>Oklahoma</u>	<u>95</u>	<u>100%</u>
<u>Jeffers</u>	<u>Minnesota</u>	<u>50</u>	<u>99%</u>
<u>Mountain Wind I</u>	<u>Wyoming</u>	<u>60</u>	<u>100%</u>
Storm Lake I	Iowa	<u>109</u>	<u>100%</u>
San Juan Mesa	New Mexico	120	<u>75%</u>
<u>Hardin</u>	<u>Iowa</u>	<u>15</u>	<u>99%</u>
<u>Crosswinds</u>	<u>Iowa</u>	<u>21</u>	<u>99%</u>
Woodstock Hills	Minnesota	10	75%
Shaokatan Hills	Minnesota	12	75%

Lakota Ridge	Minnesota	11	75%
Westridge Portfolio	Minnesota	17	97%
West Pipestone Portfolio	Minnesota	8	99%
Bingham Lake Portfolio	Minnesota	15	99%
East Ridge Portfolio	Minnesota	10	99%
Total Wind Projects		<u>715</u>	

#### **4.0 Investments in Maine**

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Edison Capital's affordable housing business unit has invested over \$1 billion in 350 affordable housing projects in 36 states, including, the Ledges at Pinebrook, a 132-unit apartment complex providing affordable housing for low income residents in Saco and Old Orchard Beach, Maine.

#### **5.0 Economics of a Black Nubble Only Project**

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Edison and MMP evaluated the economics of a single mountain project during the summer of 2006 when NRCM first raised the Black Nubble - only option. At the time, based on the estimated construction costs and power prices, we concluded that the one mountain project would be unlikely to meet Edison's, and the larger market's, minimum rate of return. Furthermore, we also determined that the power sales market could not then withstand the increase in power prices required to attain the minimum rate of return. Therefore, MMP concluded, at that time, that Edison could not justify undertaking the cost of developing a single-mountain project and Mr. Mann presented testimony to that effect during the hearing.<sup>1</sup>

However, after the January 2007 vote of the Commission, MMP revisited the economic analysis related to a one-mountain project.

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<sup>1</sup> August 3, 2006 PowerPoint Presentation of Randolph Mann.

After further investigation of cost reduction and revenue enhancing measures, combined with changes in the windpower market in the full year since the summer of 2006, MMP has concluded that a Black Nubble only project is economically viable.

Since the hearings last summer, MMP further investigated ways to reduce costs so that the one-mountain project would require a smaller increase in price. Our construction and design team targeted ways that we could maintain reasonable construction costs without sacrificing safety and regard for the environment. We have also explored tax increment financing, similar to the tax increment financing proposed by other wind projects in Maine, as a way to reduce ongoing costs.

MMP has also investigated ways to enhance revenue. MMP has begun the process of renegotiating the price of our power sales contract with our energy distributor. MMP is now confident that the market for windpower will sustain the necessary adjustments, because the market for wind power in the region has improved significantly since the date the power sales contract was originally negotiated and since the summer of 2006. Wind power prices are generally established by considering the future price expectations for various subcomponents (e.g. electricity prices which in Maine are largely driven by natural gas prices, electric generation capacity prices, and renewable energy credit (REC) prices reflecting a “green premium” for windpower, potential power price increases caused by carbon emission limitations, as well as the overall supply and demand balance for wind energy in the state and the region. MMP has a bullish or optimistic view on the value of each component, and taken together, these elements support the economic viability of the Black Nubble project:

1. **Electricity:** Electricity pricing in Maine is increasingly driven by natural gas as the dominant fuel in the NEPOOL region. Over the long term life of the Black Nubble project, MMP anticipates challenges for the region in expanding natural gas supply to meet growing demand. Therefore, MMP anticipates that high natural gas prices and resultant high power prices will support the economic viability of the Black Nubble project.<sup>2</sup>

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<sup>2</sup> The addition of the Black Nubble Wind Farm will result in lower power prices to Maine consumers. Thus, this benefit provided to Maine consumers by the Black Nubble Wind Farm is increasingly important in a market where natural gas prices and the resultant power prices are high.

2. **Capacity:** Recent changes in NEPOOL market rules enable electric generators such as the Black Nubble project to earn capacity payments reflecting their installed capability to generate power when needed. Although modest, this additional revenue source contributes to the Black Nubble project's economic viability. This revenue, however, must be combined with revenue received from operating the Black Nubble Wind Farm in order to make the project economically viable.
  
3. **Renewable Energy Credits:** The price of RECs to be generated by the Black Nubble project have maintained high price levels, reflecting the development challenges for wind power and the growing demand for renewable energy in the NEPOOL area. REC pricing is strong throughout the Northeast and Mid-Atlantic states. Given the limited wind regimes available, the density of population and a strong environmental ethic, we expect the availability of wind projects to be limited and the demand for wind power to be high. MMP remains optimistic that REC prices to be realized by the Black Nubble project will be high in the years ahead.
  
4. **Greenhouse Gas:** In today's electricity market, there is no cost for emitting carbon dioxide, a dominant greenhouse gas. As both federal and regional limitations are implemented, MMP believes that electricity prices will reflect the added cost of compliance which in NEPOOL will be borne largely by natural gas power plants. A modern natural gas fired power plant emits approximately 1,100 pounds of CO<sub>2</sub> / MWh. As a result, a \$15 / ton CO<sub>2</sub> tax or allowance price can be expected to add about \$8/MWh to the price of electricity. This value is not currently reflected in today's power pricing, but as such restrictions are implemented, Maine Mountain Power's zero emissions wind power would be positioned to capture the value of all carbon related power price increases.

Given current and expected power, capacity, REC and carbon pricing, MMP believes that the windpower market can sustain a significant increase in price. In combination, these cost-reducing and revenue enhancing measures give us the necessary confidence that the Black Nubble project can achieve a reasonable rate of return on investment. The smaller project will produce less power at a higher price but still provides a significant amount of much-needed clean energy for Maine.

If MMP believed that the Black Nubble-only project could not succeed, we would have withdrawn our application. However, MMP is submitting the revised Black Nubble Project because we believe that it will be economically viable. However, the timely receipt of approval to build the project is essential to this analysis.