



STATE OF MAINE
DEPARTMENT OF CONSERVATION
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04333-0022

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TO: Commission Members
FROM: Marcia Spencer Famous, Senior Planner
DATE: March 3, 2010
SUBJECT: Development costs and benefits for grid-scale wind energy development in the expedited permitting areas of LURC jurisdiction

Grid-scale wind energy development approved to date by LURC includes: First Wind's Stetson Wind Project (so-called Stetson I) and the Jimmey Mtn./Owl Mtn. Project (so-called Stetson II); and TransCanada's Kibby Wind Power Project (KWPP). The estimated development costs and project benefits data are summarized herein, as well as the actual development costs and benefits where that information is available at this time.

A. **TransCanada's Kibby Wind Power Project (132 MW):** Consists of 44 turbines, being constructed in two series. The 66 MW A-Series became operational in the fall 2009. The 66 MW B-Series is under construction and is expected to become operational in the fall of 2010. This project was reviewed under LURC's statute and rules prior to the Wind Energy Act [PL 2007 Ch. 661].

1. Actual and estimated development costs

(a) *Estimated* total project cost - \$320 million

Actual construction costs to date (construction not yet complete) - \$107.7 million spent in Maine since construction started (92% of overall construction costs); total overall for construction so far is estimated to be \$117 million; A-Series is completed, transmission line is completed, B-Series is still under construction due to be completed and operational next fall.

o Of this, \$7.75 million has been spent locally (Franklin County)

o Turbine cost - \$180 million for all 44 turbines

(b) *Actual* permitting costs - \$5 million spent overall, including met towers, \$3 million spent in Maine

o Final total LURC permit fees: \$96,031.08

o Application fee - \$27,000

o Final total processing fee: \$69,031.08

2. Actual and estimated benefits

(a) *Actual* - 300 jobs during peak construction (90% from Maine); and 9 jobs to operate and maintain the facility (All hired from within Maine. Four more positions in the process of being filled to support B-Series maintenance.)

(b) *State Property taxes* - TIF agreement signed; \$4 million to go to Franklin County over 20 years for economic development, \$9 million to the state, \$9 million back to the company.

(c) *Local property taxes* - For transmission line and Bigelow substation upgrade: TBD

(d) *Estimated* - 357 million kWh of energy per year

(e) *Estimated* - Pollution (in tons/year) displaced - 200,000 of CO₂, 350 of SO₂, and 90 of NO_x

(f) *Actual* - Eustis/Stratton community benefit package - \$132,000 annually

- (g) *Actual* - Financial contribution for conservation projects
Kibby Wind Power Project Conservation Agreement: Agreed to not develop wind power on approximately 1,100 acres of high-elevation ridgelines; and contributed \$500,000 toward a larger conservation effort by the State in partnership with the Trust for Public Land to help ensure protection of a buffer along approximately four mile long Grafton Loop Trail.
- (h) Lease payments to landowner – Amount not available (likely to be confidential information)
- (i) *Actual (in process)* - \$15,000 payment to State of Maine Bureau of Public Lands to develop a nature trail in the vicinity of the project.
- (j) *Actual* community investments – Approximately \$50,000 provided to Maine and Franklin County organizations that requested support for Education, Health, Human Services, Environment, and Civic Investment projects.
- (k) *Actual* - Sponsored award winning Kibby Boot Camp program run by Wilton Career Center that provided work skills, safety training and renewable energy, construction, and environmental experiences for 10 disadvantaged local students.

B. First Wind's Stetson Wind Project (Stetson I) (57 MW): Consists of 38 turbines, for a total of 57 MW; became operational in January 2009. This project was reviewed under LURC's statute and rules prior to the Wind Energy Act [PL 2007 Ch. 661].

1. Actual and estimated development costs

- (a) *Estimated* development costs - \$100 million, of which the turbines would be \$66 million and the transmission lines would be \$15 million.
- (b) *Actual* development costs (not including transmission line)
 - o Permitting, pre-construction studies: \$5 to 7 million
 - o Development cost overall – approximately \$140 million
 - o Turbines - \$80 million
- (c) *Actual* - Final total LURC permit fees \$34,530
 - o Application fee - \$10,000
 - o Final total processing fee: \$24,530

2. Estimated and actual benefits

- (a) *Estimated* - 300 engineering, design, and construction jobs; five (5) permanent jobs to operate and maintain the facility.
Estimated - Approximately \$25 million would be generated by this project in local jobs and spending.
Actual - Employed 99 business statewide, 24 local businesses in the Danforth area, and 17 Maine engineers and consultants either employed or who provided services.
Actual - Approximately 350,000 direct labor hours spent to construct the generating facility, equating to approximately \$10.5 million dollars paid directly to Maine workers.
- (b) *Actual* - Of \$65 million spent to construct the facility, approximately \$50 million was spent in Maine.
- (c) *Estimated* - Property tax payment provided to Washington County and the State of Maine, expected approximately \$500,000 annually (estimated prior to TIF agreement)
Actual - TIF agreement with Washington County Commissioners resulted in average annual payment of \$185,000 to Washington County: created new position to support business retention and attraction, established a new commercial revolving loan fund to assist business start-up and expansion, planning for a commercial facility for conference/tourism, and evaluating of the need for and location to construct new businesses.
- (d) *Estimated* - 164,776 MWh of energy produced per year
Actual - 138,969 MWh (after first year of operation, 1/23/09 to 12/31/09)

- Equivalent of 19,458 residential customers served
- (e) *Estimated* - Pollution displaced would be 107,492 metric tons/year, including approximately 90,000 tons of CO₂.
 - Actual* from first annual report - (Note - The estimated vs actual data are not comparable; First Wind used different calculators to determine; the calculator used for the estimate is no longer available.)
 - o CO₂ (tons) - 57,631
 - o NOX (tons) - 60
 - o SO₂ (tons) - 164
 - o Equivalent to number of cars on the road - 10,067
 - o Equivalent BBL's of oil - 258,323
 - o Equivalent tons of coal - 73,804
 - (f) *Actual* - Contribution to Stetson Mountain Fund for Baskahegan Stream watershed project in conjunction with Stetson II (see below).
 - (g) Lease payments to forest operations landowner Lakeville Shores, LLC actual amount not available (likely to be confidential information); landowner testified that the payments will help them stay in business and employ local residents in their forest operations business.
- C. **First Wind's Owl Mtn. and Jimmey Mtn. Project (Stetson II) (25.5 MW):** Consists of 17 turbines, construction started in fall of 2009, with a projected completion date of March 2010. This permit was reviewed under the provisions of the law contained in the Wind Energy Act [PL 2007 Ch. 661].
- 1. Estimated development costs (Except as noted, all "actual" data will not be available until after the project construction is complete.)
 - (a) *Estimated* development cost - \$60 million
 - Actual cost*, permitting and pre-construction studies - \$3 million
 - (b) *Actual cost*, turbines - \$34 million
 - (c) *Actual* - LURC permit application fee - \$25,000
 - 2. Estimated benefits (Except as noted, "actual" data will not be available until after the project construction is complete.)
 - (a) *Estimated* - Expected to be proportionally similar to the benefits that resulted from the construction and operation of the SWP discussed above (SWIP is a smaller project).
 - (b) *Actual* commitment - Additional \$25,000 contribution to Stetson Mountain Fund for Baskahegan Stream watershed project.
 - (c) Lease payments to forest operations landowner Lakeville Shores, LLC; actual amount not available (likely to be confidential information).
 - (d) Property taxes - TIF agreement being discussed, no data available yet