



# ***Plymouth County Sheriff's Department Wind Turbine Project***

## **DIMENSIONS**

<b>Tower Height</b>	<b>80 Meters (262 feet)</b>
<b>Blade Length</b>	<b>45 Meters (148 feet)</b>
<b>Overall Height</b>	<b>125 Meters (410 feet)</b>

## **TURBINE**

**Current design calls for a 1.8MW Vestas V-90 wind turbine device**

## **ENERGY OUTPUT**

**Average annual energy generation estimated at 4,827 MWh. When completed, the turbine would meet approximately 88 percent of PCCF's 5,462 MWh electrical demand per year, enough energy to power 430 homes.**

## **FUNDING**

**Project subject to public bidding; Commonwealth of Mass General Obligation Bonds**

## **SAVINGS**

<b>Avoided energy costs</b>	<b>\$596,160</b>
<b>Excess Metering Credits</b>	<b>+\$59,471</b>
<b>Renewable Energy Credits</b>	<b><u>+\$67,578</u></b>
<b>Total Annual Benefits</b>	<b>\$723,209</b>

## **TOTAL PROJECT COST**

**Estimated \$5-\$5.5 Million (To Be Determined by Bidding)**

## **TIMETABLE**

<b>May 2011</b>	<b>Advertisement of Bids</b>
<b>August 2011</b>	<b>Construction Begins</b>
<b>August 2012</b>	<b>Construction Substantially Completed</b>
<b>November 2012</b>	<b>Commercial Operation</b>

## **CHRONOLOGY**

<b>May 2007-May 2008</b>	<b>On-site Met Tower wind data collected</b>
<b>July 2008</b>	<b>Wind Feasibility Study Completed</b>
<b>January 2009</b>	<b>Wind Feasibility Study updated to reflect improved economic benefits of Green Communities Act</b>
<b>December 2010</b>	<b>Preliminary Design and Permitting Process Begins</b>