



NEW ENGLAND
BOARD OF
HIGHER EDUCATION

A CLIMATE CHANGE ON CAMPUS

NEW ENGLAND SUSTAINABILITY SUMMIT 2010

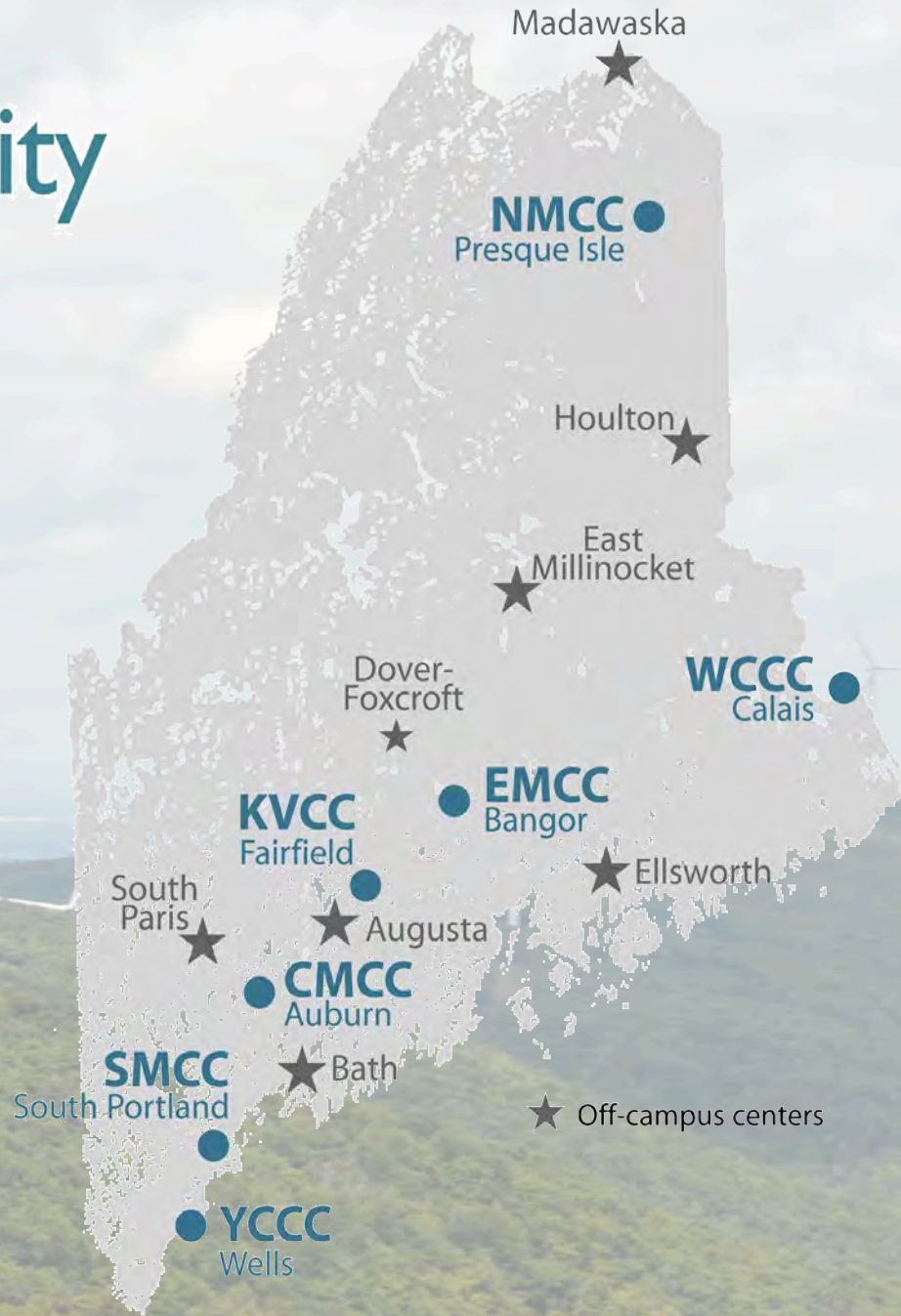
New England Higher Education Sustainability Summit 2010: *A Climate Change on Campus*

Friday, April 23, 2010 -- 8:45 A.M. to 4:15 P.M.

Crowne Plaza Hotel -- Worcester, Massachusetts



Maine Community College System



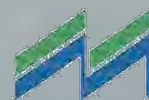


**NORTHERN
MAINE**
COMMUNITY COLLEGE

You can get there from here.

Wind Power

Technology



MAINE PUBLIC SERVICE

VALUES AT WORK



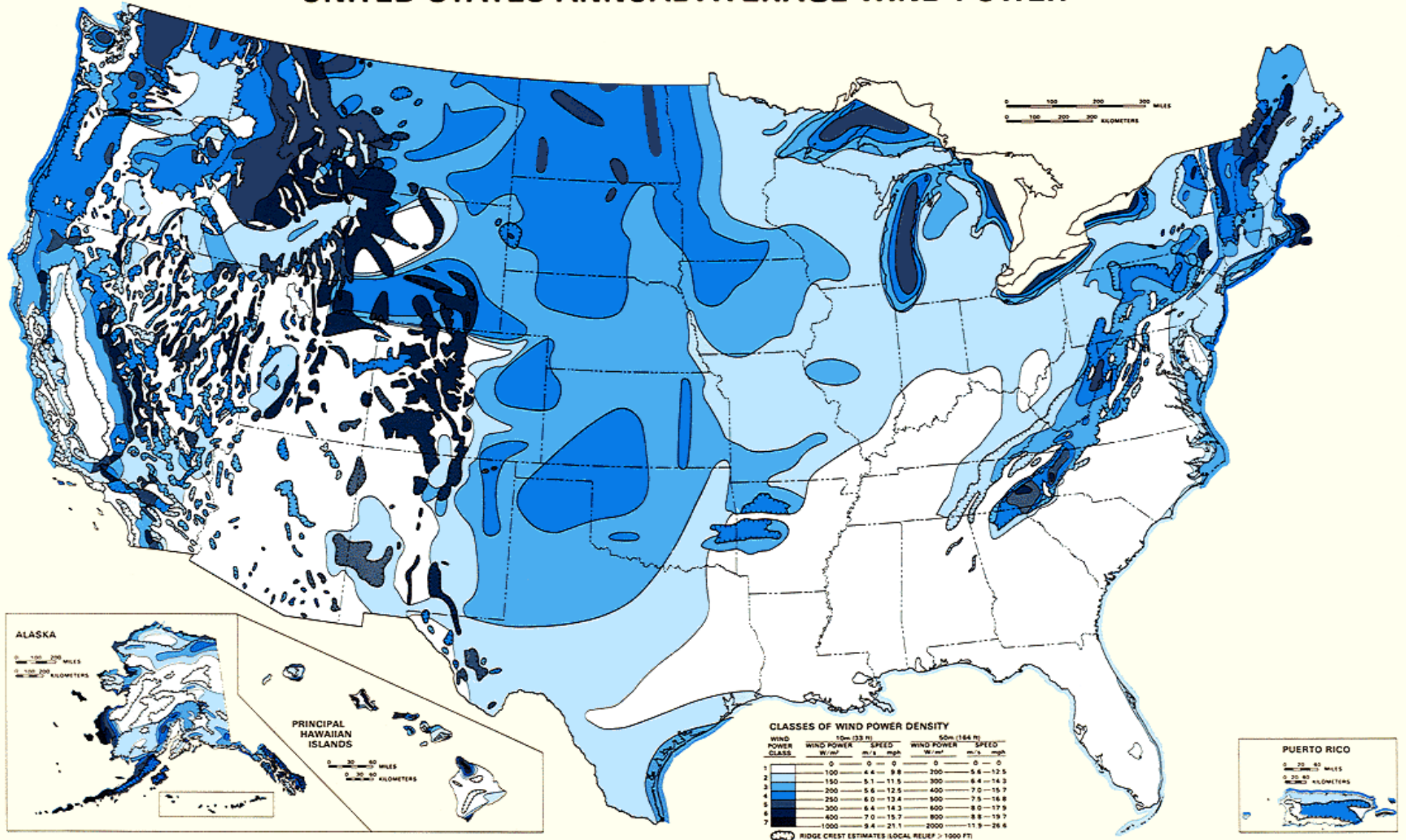
Wind Power Potential



- A report released by the Governor's Task Force on Wind Power Development in February 2008 recommended that Maine host 2 GW (gigawatts) of wind power by 2015 and 3 GW by 2020.
- In order to host 2 GW of power in 2015, modeling from the U.S. Department of Energy's Job and Economic Development Impact (JEDI) model indicates that least 180 field technicians, administrators and managers will be needed.

Understanding Wind Power Opportunities

UNITED STATES ANNUAL AVERAGE WIND POWER



Wind Power Potential



- Aroostook County is home to Northern New England's first commercial wind farm, just 14 miles from campus, in Mars Hill
- Further development is under consideration within the service area of the College, and additional projects have completed the required studies in bordering New Brunswick.

Program Highlights



- **Safety Fundamentals**
- **Electrical Systems Fundamentals**
- **Mechanical Systems Fundamentals**
- **PLC/Communication Fundamentals**
- **Delivery System Fundamentals**
- **Maintenance Concepts**
- **Wind Turbine Siting and Park Layout**
- **Wind Farm Management Concepts**

Curriculum '09/'10

Wind Power Technology

<u>Course</u>	<u>Description</u>	<u>C</u>	<u>L</u>	<u>CR</u>
<u>First Semester</u>				
ELS 115	Basic Electricity/Electronics	3	0	3
ELS 116	Basic Electricity/Electronics Lab	0	6	2
ENG 111	English Composition	3	0	3
MAT 117	Electrical Mathematics I	3	0	3
SAE 117	Industrial Safety (10 hour OSHA)	1	0	1
WPT 113	Safety Fundamentals for Wind Technicians	2	2	3
WPT 115	Concepts of Wind Power Technology	2	2	3
		<u>14</u>	<u>10</u>	<u>18</u>
<u>Second Semester</u>				
COM 125	Technical Communications	3	0	3
DIB 113	Introduction to Digital Basics	2	2	3
ELS 124	Industrial Electronics	2	3	3
ELS 125	Motors and Controls	2	3	3
MAT 127	Electrical Mathematics II	3	0	3
WPT 123	Residential Wind Technology	2	2	3
		<u>14</u>	<u>10</u>	<u>18</u>
<u>Third Semester</u>				
COE 125	Computer Network Hardware	2	2	3
IFP 110	Industrial Fluid Power Technology	2	3	3
PHE 124	Ergonomics/Occupational Wellness	1	0	1
PHY 150	Physics	3	2	4
WPT 223	Wind Turbine Mechanical Systems	2	2	3
	Social Science Elective	3	0	3
		<u>13</u>	<u>9</u>	<u>17</u>
<u>Fourth Semester</u>				
ELC 116	National Electrical Code for Industry	3	0	3
WPT 213	Wind Power Control Systems	2	3	3
WPT 214	Wind Power Delivery Systems	2	3	3
WPT 224	Wind Turbine Management	3	2	3
	Humanities Elective	3	0	3
	Elective	3	0	3
		<u>16</u>	<u>8</u>	<u>18</u>

Total Required

71



Safety Fundamentals



Wind Industry Safety Practices:

- Working at Heights
- Tower Rescue Systems
- Arc Flash Hazards
- Cranes and Riggings

Working with:

- High pressure fluids
- Electrical systems
- Mechanical systems







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