

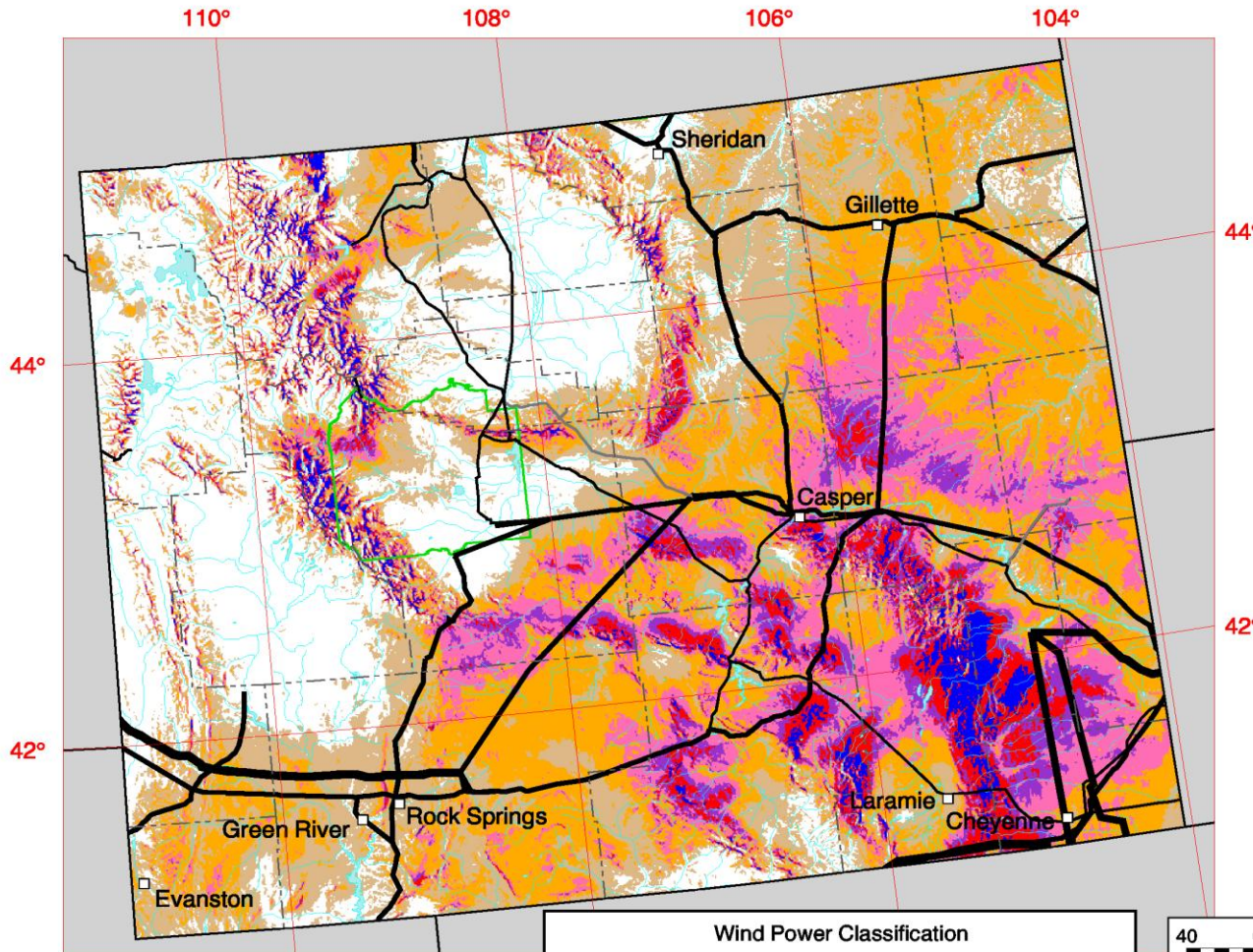
**COMPARISON OF
WIND ENERGY RESOURCE CHARACTERISTICS
BETWEEN
SOUTHEASTERN WYOMING
AND
EASTERN COLORADO**


Wyoming Infrastructure Authority
Public Quarterly Board Meeting
9 November 2010

Richard L. Simon, Director
V-Bar, LLC
Salt Lake City, Utah







Wyoming Wind Power Resource Estimates









 Wind River Indian Reservation

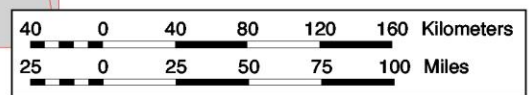
Transmission Line*
Voltage (kV)

-  69
-  115
-  230
-  345

* Source: POWERmap, ©2002 Platts, A Division of the McGraw-Hill Companies

Wind Power Classification				
Wind Power Class	Resource Potential	Wind Power Density at 50 m W/m ²	Wind Speed ^a at 50 m m/s	Wind Speed ^a at 50 m mph
	2 Marginal	200 - 300	5.6 - 6.4	12.5 - 14.3
	3 Fair	300 - 400	6.4 - 7.0	14.3 - 15.7
	4 Good	400 - 500	7.0 - 7.5	15.7 - 16.8
	5 Excellent	500 - 600	7.5 - 8.0	16.8 - 17.9
	6 Outstanding	600 - 800	8.0 - 8.8	17.9 - 19.7
	7 Superb	> 800	> 8.8	> 19.7

^aWind speeds are based on a Weibull k value of 2.0



U.S. Department of Energy
National Renewable Energy Laboratory

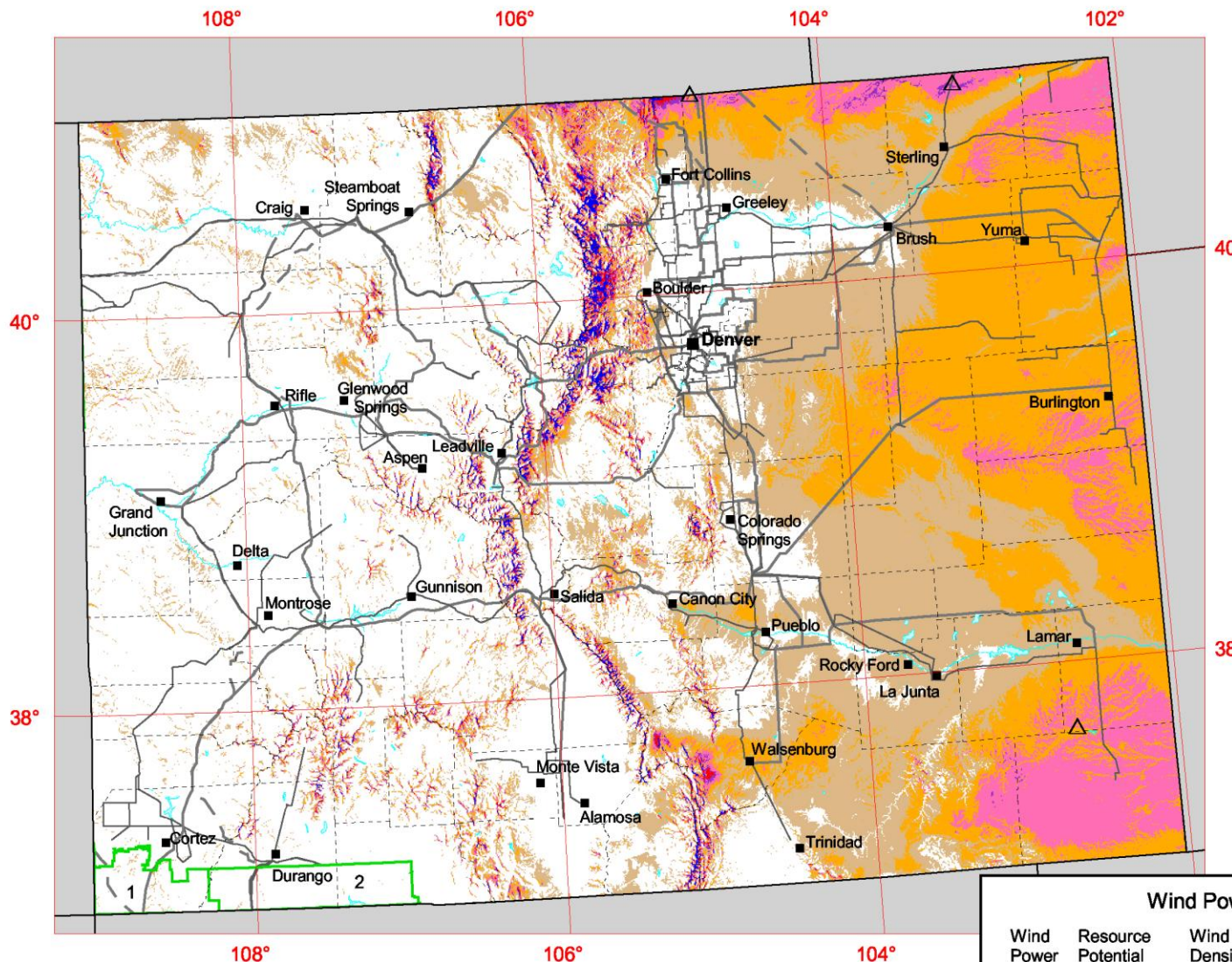


06-JUN-2002 2.1.2

The wind power resource data for this map was produced by TrueWind Solutions using the Mesomap system and historical weather data. It has been validated with available surface data by the National Renewable Energy Laboratory and wind energy meteorological consultants.

Colorado

50 m Wind Power



Transmission Line*
Voltage (kV)

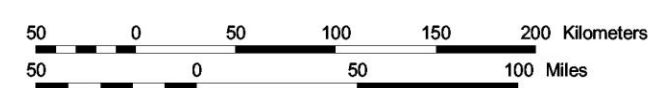
- 115 - 161
- 230
- - 345

* Source: POWERmap, ©2003
Platts, a Division of the
McGraw-Hill Companies

The annual wind power estimates for this map were produced by TrueWind Solutions using their Mesomap system and historical weather data. It has been validated with available surface data by NREL and wind energy meteorological consultants.

Wind Power Classification				
Wind Power Class	Resource Potential	Wind Power Density at 50 m W/m ²	Wind Speed ^a at 50 m m/s	Wind Speed ^a at 50 m mph
1	Poor	0 - 200	0.0 - 5.9	0.0 - 13.2
2	Marginal	200 - 300	5.9 - 6.7	13.2 - 15.0
3	Fair	300 - 400	6.7 - 7.4	15.0 - 16.6
4	Good	400 - 500	7.4 - 7.9	16.6 - 17.7
5	Excellent	500 - 600	7.9 - 8.4	17.7 - 18.8
6	Outstanding	600 - 800	8.4 - 9.3	18.8 - 20.8
7	Superb	> 800	> 9.3	> 20.8

^a Wind speeds are based on a Weibull k of 2.0 at 1500 m elevation.



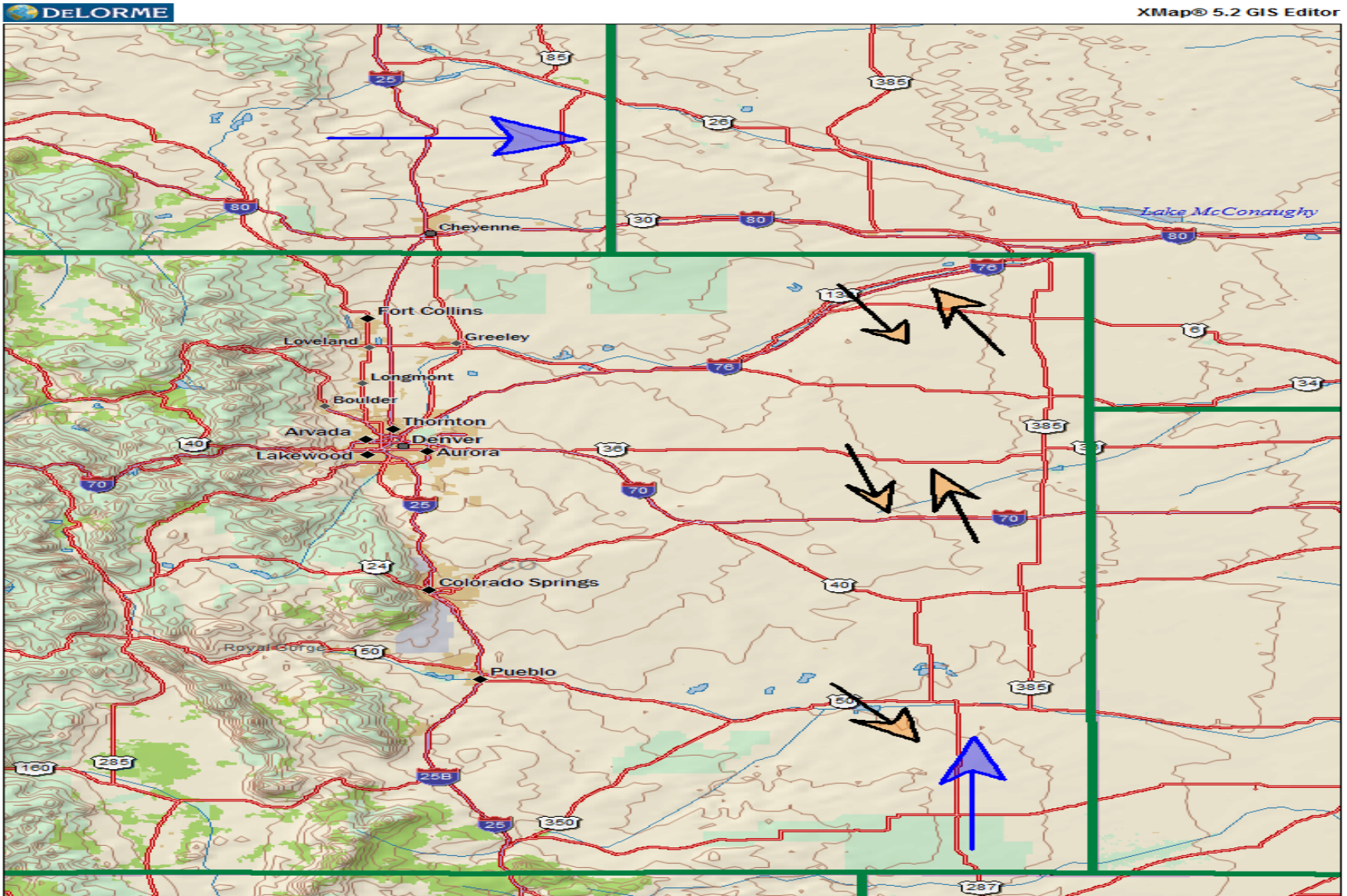
U.S. Department of Energy
National Renewable Energy Laboratory



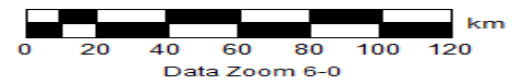
Indian Reservation

- 1 Ute Mountain
- 2 Southern Ute

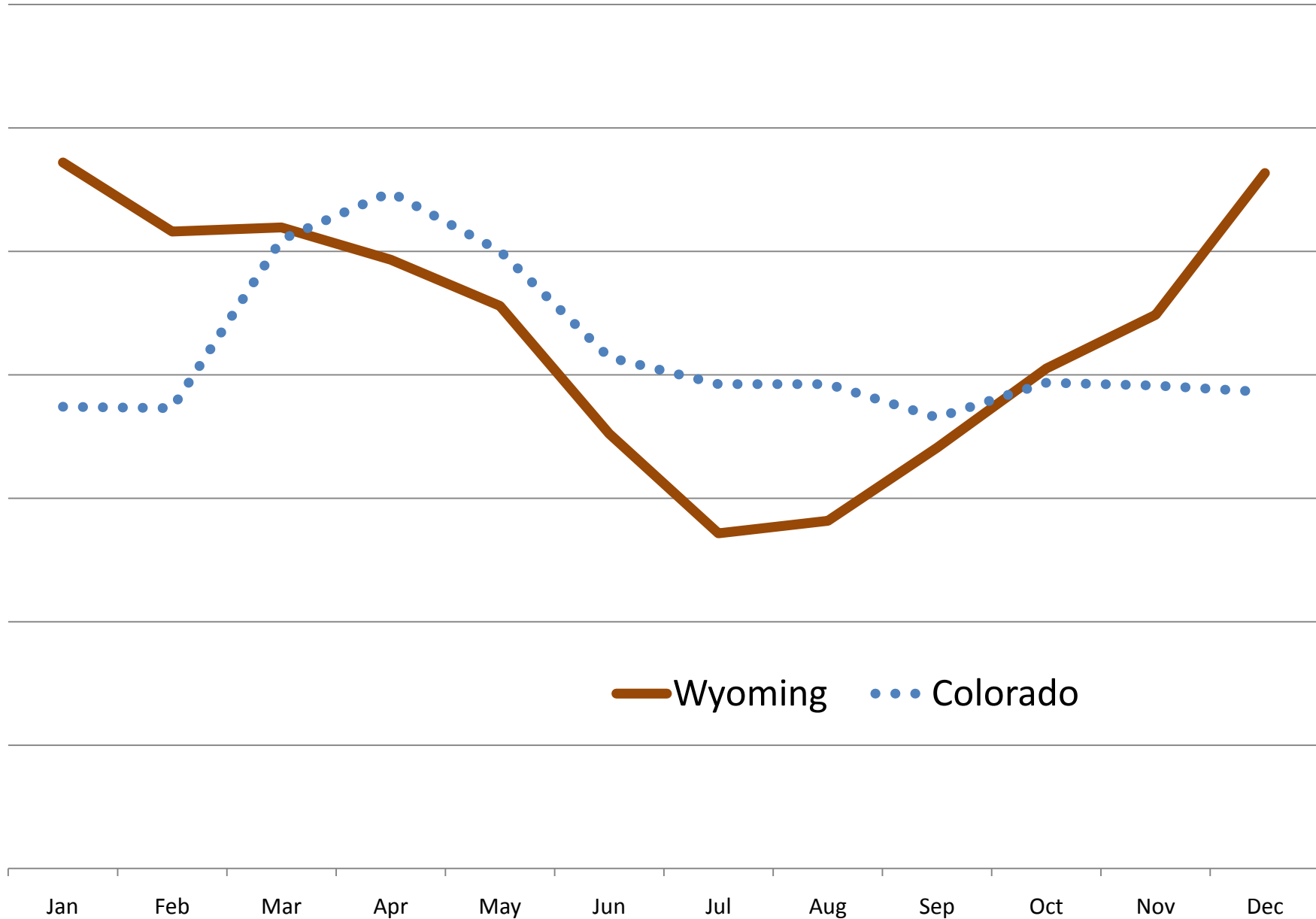
Prevailing Wind Direction Patterns



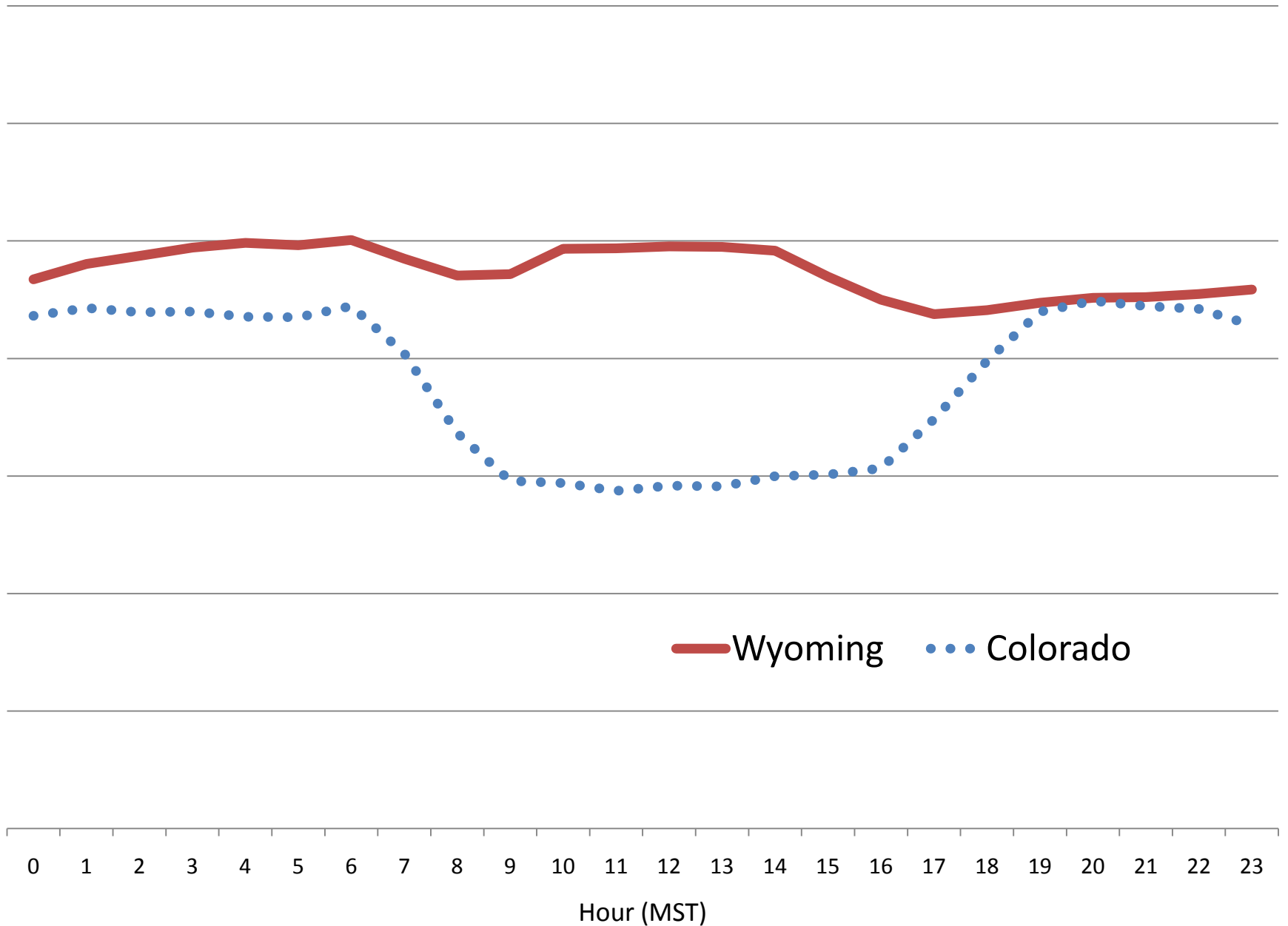
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Monthly Mean Energy Potential



Diurnal Energy Potential, Fall/Winter



Diurnal Energy Potential, Spring/Summer

