## Grid Analysis Documentation

## 1 Grid

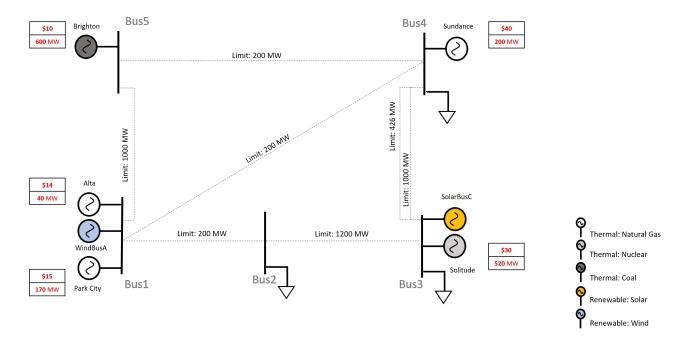


Figure 1: 5\_bus Grid

## 2 Forcasts

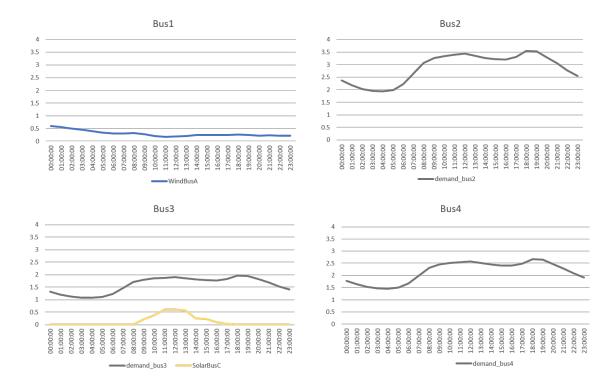


Figure 2: Demanda and Renewable Generation Forcasts

## 3 Thermal generators and lines data

name	Park City	Alta	Solitude	Sundance	Brighton	
available	true	true	true	true	true	
status	true	true	true	true	true	
bus	Bus1	Bus1	Bus3	Bus4	Bus5	
active_power	1.7	0.4	3.24498	0	4.70694	
reactive_ power	1.275	0.3 3.9		-0.10802	-1.65039	
active_	min = 0.5,	min = 0.05,	min = 2.6,	min = 1.0,	min = 3.0,	
power_limits	max = 1.7	max = 0.4	max = 5.2	max = 2.0	max = 6.0	
reactive_	min = -1.275,	min = -0.3,	min = -3.9,	min = -1.5,	min = -4.5,	
power_limits	max = 1.275	max = 0.3	max = 3.9	max = 1.5	max = 4.5	
ramp_limits	up = 0.0,	up = 0.0,	up = 0.0,	up = 0.0,	up = 0.0,	
	down = 0.0	down = 0.0	down = 0.0	down = 0.0	down = 0.0	
operation_cost (VariableCost:	(0.0, 15.0),	(0.0, 14.0),	(0.0, 30.0),	(0.0, 40.0),	(0.0, 10.0),	
fixed:	0.0,	0.0,	0.0,	0.0,	0.0,	
start_up:	0.0,	0.0,	0.0,	0.0,	0.0,	
shut_down:)	0.0	0.0	0.0	0.0)	0.0)	
base_power	100	100	100	100	100	
fuel	NATURAL	NATURAL	NILICIEAD	NATURAL	COAL	
(ThermalFuels.)	_GAS: 7	_GAS: 7	NUCLEAR: 9	_GAS: 7	COAL: 1	

Table 1: Thermal generators data.

name	bus1-bus2	bus1-bus4	bus1-bus5	bus2-bus3	bus3-bus4	bus3-bus4	bus4-bus5		
	-i_1	-i_2	-i_3	-i_4	-i_5	-i_6	-i_7		
available	true	true	true	true	true	true	true		
active_	0	0	0	0	0	0	0		
power_flow					· ·				
reactive_	0	0	0	0	0	0	0		
power_flow		0		0	O				
arc	Arco	Arco	Arco	Arco	Arco	Arco	Arco		
r	0.00281	0.00304	0.00064	0.00108	0.00297	0.00297	0.00297		
X	0.0281	0.0304	0.0064	0.0108	0.0297	0.0297	0.0297		
b	0.00356,	0.00329,	0.01563,	0.00926,	0.00337,	0.00337	0.00337,		
(from, to):	0.00356	0.00329	0.01563	0.00926	0.00337	0.00337	0.00337		
rate	2	2	10	12	10	4.26	2		
angle_limits	$\min = -0.5235987755982988,$								
	$\max = 0.5235987755982988$								

Table 2: Lines data.