
Generation Supply Plan Additional Detail

EAI's generation portfolio supply plan will differ by strategic option – MW amount of resources may change under some options

Generation Portfolio Overview Preliminary-Illustrative										
Functional Requirement	Reason for Requirement	Amount of Capability Required								
		Self Provide Strategic Option			EAI & Third Party Arrangement Strategic Option			Successor Arrangements Strategic Option		
		ICT	SPP	MISO	ICT	SPP	MISO	ICT	SPP	MISO
BASE LOAD GENERATION		2579 MW	2579 MW	2579 MW	2579 MW	2579 MW	2579 MW	2579 MW	2579 MW	2579 MW
FLEXIBLE GENERATION	REGULATION	2250 MW	2250 MW	2250 MW	2250 MW	2250 MW	2250 MW	2250 MW	2250 MW	2250 MW
	OPERATING RESERVE									
	SUPPLEMENTAL RESERVE									
	CONTINGENCY RESERVE									
	LOAD FOLLOWING									
PEAKING GENERATION AND RESERVES	PEAKING GENERATION	1298 MW	970+ MW	883+ MW	1298 MW	970+ MW	883+ MW	1136 MW	970+ MW	883+ MW
	PLANNING RESERVES									
RESERVE MARGIN (prelim)		20%	13.6+%	11.9+%	20%	13.6+%	11.9+%	16.9%	13.6+%	11.9+%
TOTAL		6127 MW	5799+ MW	5712+ MW	6127 MW	5799+ MW	5712+ MW	5965 MW	5799+ MW	5712+ MW

RTO planning reserves based upon membership minimum reserve margins; reserve deliverability may require additional reserves

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Preliminary-Illustrative

Generation Portfolio Overview										
Functional Requirement	Reason for Requirement	Amount of Capability Required								
		Self Provide Strategic Option			EAI & Third Party Arrangement Strategic Option			Successor Arrangements Strategic Option		
		ICT	SPP	MISO	ICT	SPP	MISO	ICT	SPP	MISO
BASE LOAD GENERATION	Provide low cost, secure energy source with stable prices	2579 MW	2579 MW	2579 MW	2579 MW	2579 MW	2579 MW	2579 MW	2579 MW	2579 MW
FLEXIBLE GENERATION	REGULATION - Balance Generation with load variations in real-time	2250 MW	2250 MW	2250 MW	2250 MW	2250 MW	2250 MW	2250 MW	2250 MW	2250 MW
	OPERATING RESERVE - On-line unloaded generation ready to respond to contingencies									
	SUPPLEMENTAL RESERVE - Quick response capacity to replace power lost to contingencies									
	CONTINGENCY RESERVE - Replacement power sources for outage of large resources									
	LOAD FOLLOWING - Respond to changes in load during a day or week or season									
PEAKING GENERATION AND RESERVES	PEAKING GENERATION - Provide capacity for peak period demands	1298 MW	970+ MW	883+ MW	1298 MW	970+ MW	883+ MW	1136 MW	970+ MW	883+ MW
	RESERVES - Provide additional capacity for abnormal peaks and outages to meet reserve margins for adequate reliability									
RESERVE MARGIN (prelim)		20%	13.6+%	11.9+%	20%	13.6+%	11.9+%	16.9%	13.6+%	11.9+%
TOTAL		6127 MW	5799+ MW	5712+ MW	6127 MW	5799+ MW	5712+ MW	5965 MW	5799+ MW	5712+ MW

RTO planning reserves based upon membership minimum reserve margins; reserve deliverability may require additional reserves

EAI's generation portfolio supply plan will differ by strategic option – MW amount of resources may change under some options

Relative MW Amounts

Portfolio Supply Plan											
Functional Requirement	Reason for Requirement	Portfolio Capability Required	Amount of Capability Required								
			Self Provide Strategic Option			EAI & Third Party Arrangement			Successor Arrangements		
			ICT	SPP	MISO	ICT	SPP	MISO	ICT	SPP	MISO
Base Load Generation	Low cost, secure energy source	>= 75% of annual energy reqmts	X	X	X	X	X	X	X	X	X
Flexible Generation for Regulation	Respond to +/- MW instructions for Balancing Authority ACE performance	Multiple units with AGC capability efficient for regulation	X	<X	<X	<X	<X	<X	<X	<X	<X
Flexible Generation for Operating Reserve	Quickly replace generation lost due to outage	Units economic for unloaded operation with operating range sufficient for contingencies	X	<X	<X	<X	<X	<X	<X	<X	<X
Flexible Generation for Supplemental Reserves	Quickly replace generation lost due to outage	Capacity available within 15 minutes	X	<X	<X	<X	<X	<X	<X	<X	<X
Flexible Generation for for Contingency Reserves	Replaces capacity and caps energy cost for unscheduled outage of generation unit	Replace largest unit within 90 minutes	X	X	X	X	X	X	X	X	X
Flexible Generation for routine intra-day load following	Respond to changes in load levels expected during the day	Provide total dispatchable operating range MWs >= typical daily swings	X	X	X	X	X	X	X	X	X
Seasonal and Peaking Generation	Respond to on-peak period and seasonal peak demands	Increases Total Portfolio MW >= Peak Demand	X	X	X	X	X	X	X	X	X
Planning Reserve Capacity	Reserve generation for unexpected outages and abnormal peaks	Increases Total Portfolio MW to Required Reserve Margin	X+ 0 to 400MW	X	X	X+ 0 to 400MW	X	X	X+ 0 to 200MW	X	X

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Potential Sources for Capacity

Portfolio Supply Plan											
Functional Requirement	Reason for Requirement	Portfolio Capability Required	Supply Plan for Capability Required								
			Self Provide Strategic Option			EAI & Third Party Arrangement			Successor Arrangements Strategic		
			ICT	SPP	MISO	ICT	SPP	MISO	ICT	SPP	MISO
Base Load Generation	Low cost, secure energy source	>= 75% of annual energy reqmts	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear
Flexible Generation for Regulation	Respond to +/- MW instructions for Balancing Authority ACE performance	Multiple units with AGC capability efficient for regulation	LC, CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal,3rd party	LC, CCGT, Coal,3rd party	LC, CCGT, Coal,3rd party	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange
Flexible Generation for Operating Reserve	Quickly replace generation lost due to outage	Units economic for unloaded operation with operating range sufficient for contingencies	LC, CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal,3rd party	LC, CCGT, Coal,3rd party	LC, CCGT, Coal,3rd party	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange
Flexible Generation for Supplemental Reserves	Quickly replace generation lost due to outage	Capacity available within 15 minutes	CT, purchase power	CT, purchase power	CT, purchase power	CT, purchase power, 3rd party	CT, purchase power, 3rd party	CT, purchase power, 3rd party	CT, Flex exchange	CT, Flex exchange	CT, Flex exchange
Flexible Generation for Contingency Reserves	Replaces capacity and caps energy cost for unscheduled outage of generation unit	Replace largest unit within 90 minutes	CT, CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange
Flexible Generation for routine intra-day load following	Respond to changes in load levels expected during the day	Provide total dispatchable operating range MWs >= typical daily swings	CT, CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange
Seasonal and Peaking Generation	Respond to on-peak period and seasonal peak demands	Increases Total Portfolio MW >= Peak Demand	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power
Planning Reserve Capacity	Reserve generation for unexpected outages and abnormal peaks	Increases Total Portfolio MW to Required Reserve Margin	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power

EAI's generation portfolio supply plan will differ by strategic option – MW amount of resources may change under some options

Relative MW Amounts

Portfolio Supply Plan											
Functional Requirement	Reason for Requirement	Portfolio Capability Required	Amount of Capability Required								
			Self Provide Strategic Option			EAI & Third Party Arrangement			Successor Arrangements		
			ICT	SPP	MISO	ICT	SPP	MISO	ICT	SPP	MISO
Base Load Generation	Low cost, secure energy source	>= 75% of annual energy reqmts	X	X	X	X	X	X	X	X	X
Flexible Generation for Regulation	Respond to +/- MW instructions for Balancing Authority ACE performance	Multiple units with AGC capability efficient for regulation	X	<X	<X	<X	<X	<X	<X	<X	<X
Flexible Generation Operating		Units economic									
Flexible Generation Supplemental											
Flexible Generation Contingency											
Flexible Generation routine intra day											
Flexible Generation routine intra day following											
Seasonal and Peaking Generation	Respond to on-peak period and seasonal peak demands	Increases Total Portfolio MW >= Peak Demand	X	X	X	X	X	X	X	X	X
Planning Reserve Capacity	Reserve generation for unexpected outages and abnormal peaks	Increases Total Portfolio MW to Required Reserve Margin	X+ 0 to 400MW	X	X	X+ 0 to 400MW	X	X	X+ 0 to 200MW	X	X

If supported by studies assuring RTO reserves can be delivered to EAI area, RTO participation could reduce planning reserves by 0 to 400 MW.....

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Potential Sources for Capacity

Portfolio Supply Plan												
Functional Requirement	Reason for Requirement	Portfolio Capability Required	Supply Plan for Capability Required									
			Self Provide Strategic Option			EAI & Third Party Arrangement			Successor Arrangements Strategic			
			ICT	SPP	MISO	ICT	SPP	MISO	ICT	SPP	MISO	
Base Load Generation	Low cost, secure energy source	>= 75% of annual energy reqmts	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	
<p>Baseline scenario will plan for extra planning reserve margin sourced from legacy EAI gas units or short-term purchased power transactions made in 2012-2013 timeframe.....The Transition Plan's supply plan will retain flexibility for possible reduction in planning reserve if EAI joins RTO with deliverable reserves</p>			, CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange	
			, CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange
			purchase power	CT, purchase power	CT, purchase power, 3rd party	CT, purchase power, 3rd party	CT, purchase power, 3rd party	CT, purchase power, 3rd party	CT, Flex exchange	CT, Flex exchange	CT, Flex exchange	CT, Flex exchange
			, CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange
			, CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange
following	expected during the day	in day	power	power	power	power	power	power	power	power	power	
Seasonal and Peaking Generation	Respond to on-peak period and seasonal peak demands	Increases Portfolio MW > Peak Demand	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	
Planning Reserve Capacity	Reserve generation for unexpected outages and abnormal peaks	Increases Total Portfolio MW to Required Reserve Margin	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	

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Potential Sources for Capacity

Portfolio Supply Plan												
Functional Requirement	Reason for Requirement	Portfolio Capability Required	Supply Plan for Capability Required									
			Self Provide Strategic Option			EAI & Third Party Arrangement			Successor Arrangements Strategic			
			ICT	SPP	MISO	ICT	SPP	MISO	ICT	SPP	MISO	
Base Load Generation	Low cost, secure	>= 75% of annual	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear	EAI Coal & Nuclear
			CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange	
			CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, 3rd party	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange	
			purchase power	CT, purchase power	CT, purchase power	CT, purchase power, 3rd party	CT, purchase power, 3rd party	CT, purchase power, 3rd party	CT, Flex exchange	CT, Flex exchange	CT, Flex exchange	
			CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange	
	unscheduled outage of generation unit	minutes	CT, CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange	
Flexible Generation for routine intra-day load following	Respond to changes in load levels expected during the day	Provide total dispatchable operating range MWs >= typical daily swings	CT, CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange	
Seasonal and Peaking Generation	Respond to on-peak period and seasonal peak demands	Increases Total Portfolio MW >= Peak Demand	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	EAI gas, purchase power	
Planning Reserve Capacity	Reserve generation for unexpected outages and abnormal peaks	Increases Total Portfolio MW to Required Reserve Margin	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	EAI gas, short-term purchase power	

New CCGT and CT capacity for flexible generation is a “no regrets” supply plan element.....potential sources include 2009 RFP and discussions with 3rd parties

EAI's generation operations and commitment plan will differ by strategic option – MW amount of resources may change under some options

Relative MW Amounts

Generation Operations and Commitment Plan											
Functional Requirement	Reason for Requirement	Capability Required	Amount of Capability Required								
			Self Provide Strategic Option			EAI & Third Party Arrangement Strategic Option			Successor Arrangements Strategic Option		
			ICT	SPP	MISO	ICT	SPP	MISO	ICT	SPP	MISO
Unit Commitment for Regulation	Respond to +/- MW instructions for Balancing Authority ACE performance	Reserved MWs of operating range of an on-line AGC unit	X	<X	<X	<X	<X	<X	<X	<X	<X
Unit Commitment for Operating Reserve	Quickly replace generation lost due to outage	Reserved MWs of operating range of an on-line unit	X	<X	<X	<X	<X	<X	<X	<X	<X
Unit Commitment for Supplemental Reserves	Quickly replace generation lost due to outage	Off-line generation available within 15 minutes	X	<X	<X	<X	<X	<X	<X	<X	<X
Plan for Contingency Reserves	Replaces capacity and caps energy cost for unscheduled outage of generation unit	Replacement generation available within 90 minutes	X	X	X	X	X	X	X	X	X
Unit Commitment for intra-day load following	Respond to changes in load levels expected during the day	On-line generation with dispatchable operating range of x MWs	X	X	X	X	X	X	X	X	X
Base Load Replacement Power	Provides economical/capped replacement energy price during maintenance periods	Plan for replacing largest base load unit	X	X	X	X	X	X	X	X	X

EAI's generation operations and commitment plan will differ by strategic option – operational role of resources may change under some options

Potential Sources for Capacity

Generation Operations and Commitment Plan											
Functional Requirement	Reason for Requirement	Capability Required	Plan for Capability Required								
			Self Provide Strategic Option			EAI & Third Party Arrangement			Successor Arrangements Strategic		
			ICT	SPP	MISO	ICT	SPP	MISO	ICT	SPP	MISO
Unit Commitment for Regulation	Respond to +/- MW instructions for Balancing Authority ACE performance	Reserved MWs of operating range of an on-line AGC unit	LC, CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal,3rd party	LC, CCGT, Coal,3rd party	LC, CCGT, Coal,3rd party	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange
Unit Commitment for Operating Reserve	Quickly replace generation lost due to outage	Reserved MWs of operating range of an on-line unit	LC, CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal	LC, CCGT, Coal,3rd party	LC, CCGT, Coal,3rd party	LC, CCGT, Coal,3rd party	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange	LC, CCGT, Coal, Flex exchange
Unit Commitment for Supplemental Reserves	Quickly replace generation lost due to outage	Off-line generation available within 15 minutes	CT, purchase power	CT, purchase power	CT, purchase power	CT, purchase power, 3rd party	CT, purchase power, 3rd party	CT, purchase power, 3rd party	CT, Flex exchange	CT, Flex exchange	CT, Flex exchange
Plan for Contingency Reserves	Replaces capacity and caps energy cost for unscheduled outage of generation unit	Replacement generation available within 90 minutes	CT, CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, purchase power, 3rd party	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange	CT, CCGT, Flex exchange
Unit Commitment for intra-day load following	Respond to changes in load levels expected during the day	On-line generation with dispatchable operating range of x MWs	CT, CCGT, purchase power, coal	CT, CCGT, purchase power, coal	CT, CCGT, purchase power, coal	CT, CCGT, purchase power, 3rd party, coal	CT, CCGT, purchase power, 3rd party, coal	CT, CCGT, purchase power, 3rd party, coal	CT, CCGT, Flex exchange, coal	CT, CCGT, Flex exchange, coal	CT, CCGT, Flex exchange, coal
Base Load Replacement Power	Provides economical/capped replacement energy price during maintenance periods	Plan for replacing largest base load unit	CCGT, purchase power	CCGT, purchase power	CCGT, purchase power	CCGT, purchase power,3rd party	CCGT, purchase power,3rd party	CCGT, purchase power,3rd party	CCGT, purchase power	CCGT, purchase power	CCGT, purchase power