

# Ex-ante Mitigation: Energy – Hydro – BCA

Resource Information	
Technology type of resource	Hydroelectric
Capacity	150 MW

Constrained Area Type and Applicable Test Threshold	
Constrained area	BCA
Conduct test threshold	Energy RL + MIN(300% of Energy RL, \$100/MWh)
Impact test threshold	RL run Energy LMP + MIN (\$50/MWh, 100% of RL run Energy LMP)

Energy Offers – Dispatch Data		
PQ #	Price (\$/MWh)	Quantity (MW)
1	-1999	0
2	-1999	50
3	35	75
4	40	120
5	800	150

Energy Offer Reference Level		
PQ #	Price (\$/MWh)	Quantity (MW)
1	45	0
2	45	150

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Energy Offers – Dispatch Data		
PQ #	Price (\$/MWh)	Quantity (MW)
1	-1999	0
2	-1999	50
3	35	75
4	40	120
5	800	150

Energy Offer Reference Level - Initial		
PQ #	Price (\$/MWh)	Quantity (MW)
1	45	0
2	45	150

Pre-processing of the reference level is carried out automatically in the IESO tools to prevent offer tranches below the reference level values being replaced.

The pre-processing step involves introducing low-priced tranches to the reference level curve where needed as shown here.

Energy Offer Reference Level – After Pre-Processing		
PQ #	Price (\$/MWh)	Quantity (MW)
1	-1999	0
2	-1999	50
3	35	75
4	40	120
5	45	150

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Conduct Test				
<b>Lamination</b>	0-50 MWh	50.1-75 MWh	75.1-120 MWh	120.1-150 MWh
<b>Offer Price</b>	\$-1999/MWh	\$35/MWh	\$40/MWh	\$800/MWh
<b>Is the conduct test carried out?</b>	No	Yes	Yes	Yes
<b>Conduct test threshold</b>	N/A	$\$45 + \$100 = \$145/\text{MWh}$	$\$45 + \$100 = \$145/\text{MWh}$	$\$45 + \$100 = \$145/\text{MWh}$
<b>Conduct test outcome</b>	N/A	Pass	Pass	Fail

Impact Test	
<b>Impact test needed?</b>	Yes
<b>Offer that will be used in RL run</b>	Reference Level – after pre-processing
<b>LMP from as-offered run</b>	\$800/MWh
<b>LMP from reference level run</b>	\$45/MWh
<b>Impact test threshold</b>	$\$45 + \$45 = \$90/\text{MWh}$
<b>Impact test outcome</b>	Fail

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<b>Outcome</b>	<b>Mitigation applied</b>
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<b>Energy Offers after Mitigation</b>		
<b>PQ #</b>	<b>Price (\$/MWh)</b>	<b>Quantity (MW)</b>
1	-1999	0
2	-1999	50
3	35	75
4	40	120
5	45	150