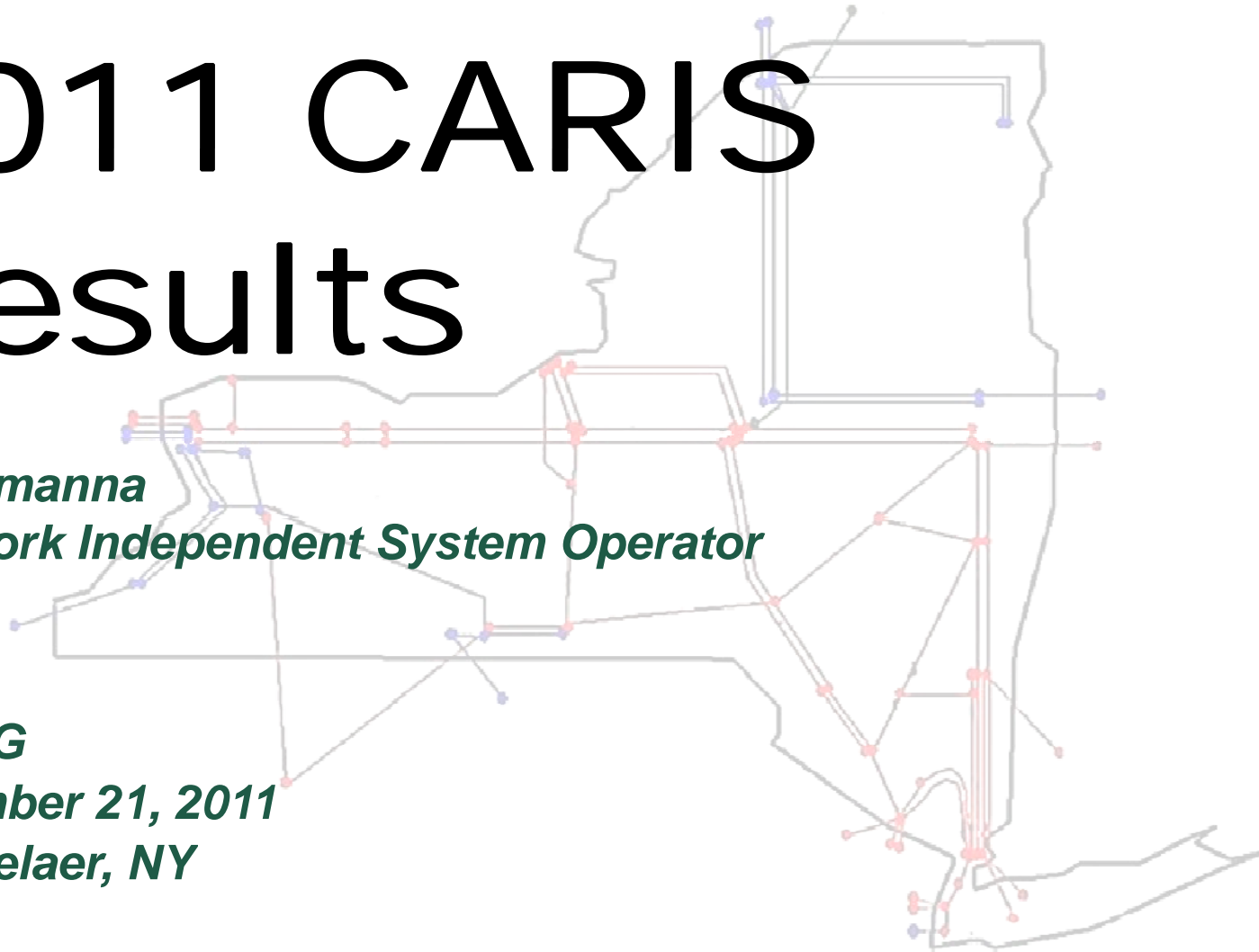


2011 CARIS Results

*Bill Lamanna
New York Independent System Operator*

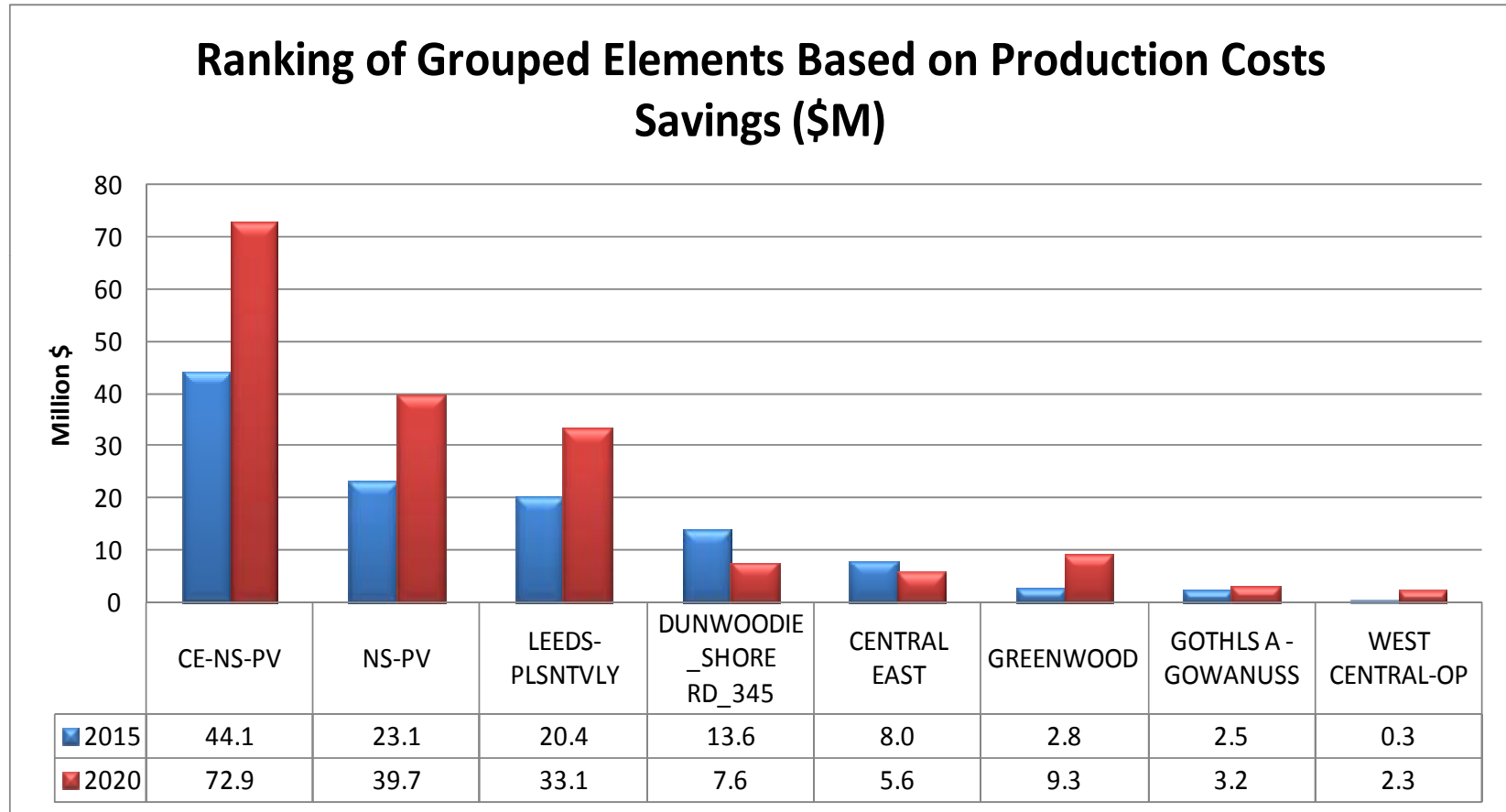
*ESPWG
November 21, 2011
Rensselaer, NY*



Relaxation Results Nominal (\$M)

Total Congestion Demand Payment (M\$)	Type	2015					2020				
		BASE CASE	Relax Leeds-Pleasant Valley	Relax Central East (CE)	Relax CE-New Scotland-LdsPV	Relax - New Scotland-LdsPV	BASE CASE	Relax Leeds-Pleasant Valley	Relax Central East (CE)	Relax CE-New Scotland-LdsPV	Relax - New Scotland-LdsPV
LEEDS-PLSNTVLY	Contingency	205	-	304	-	-	377	-	554	-	-
CENTRAL EAST	Interface	212	295	-	-	337	329	465	-	-	551
DUNWOODIE_SHORE RD_345	Contingency	54	63	54	75	65	77	86	74	106	91
GREENWOOD LINES	Contingency	9	9	10	10	10	15	14	15	15	15
WEST CENTRAL-OP*	Interface	2	3	8	13	2	9	10	18	29	10
GOTHLIS A - GOWANUSS	Contingency	5	3	5	3	3	8	6	8	5	5
LEEDS3_NEW SCOTLAND_345	Contingency	-	53	5	-	-	-	138	7	-	-

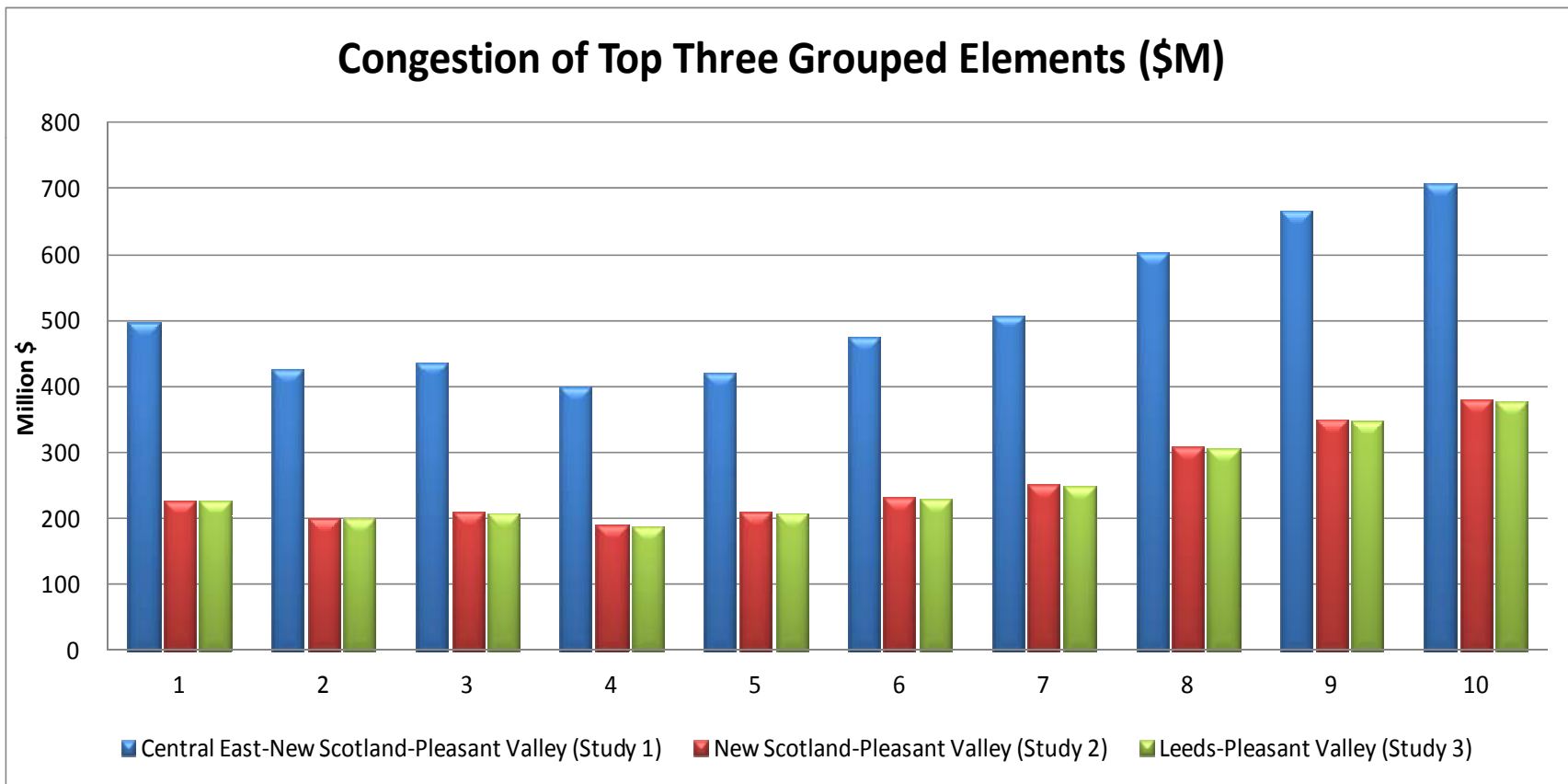
Relaxation Results



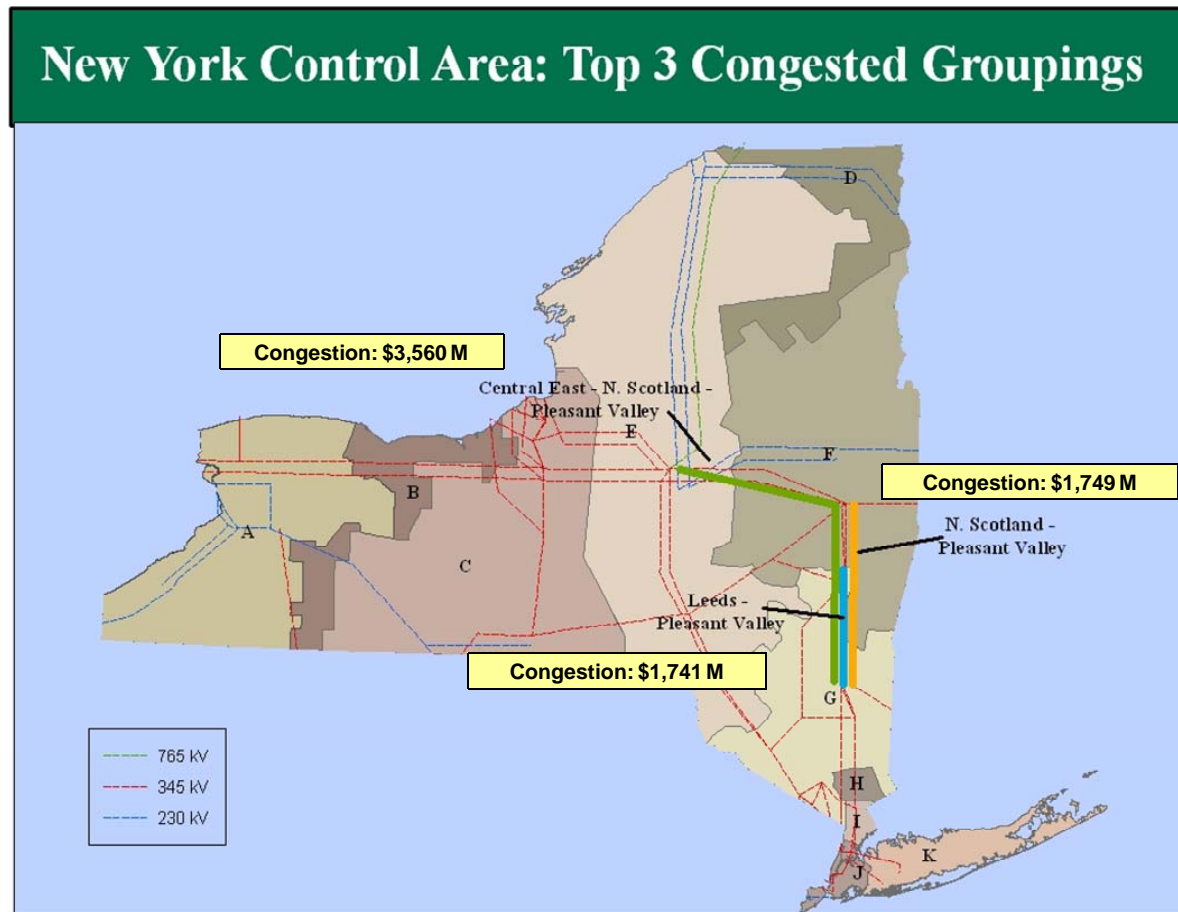
Base Case Congestion of the three CARIS Studies (\$M)

Study	Ten-Year Congestion (\$M)	
	Nominal	Present Value (2011 \$)
Study 1: Central East-New Scotland-Pleasant Valley	5,133	3,560
Study 2: New Scotland-Pleasant Valley	2,548	1,749
Study 3: Leeds-Pleasant Valley	2,535	1,741

Congestion of CARIS Studies Nominal \$M



Three CARIS Studies Congestion – Present Value (\$M)



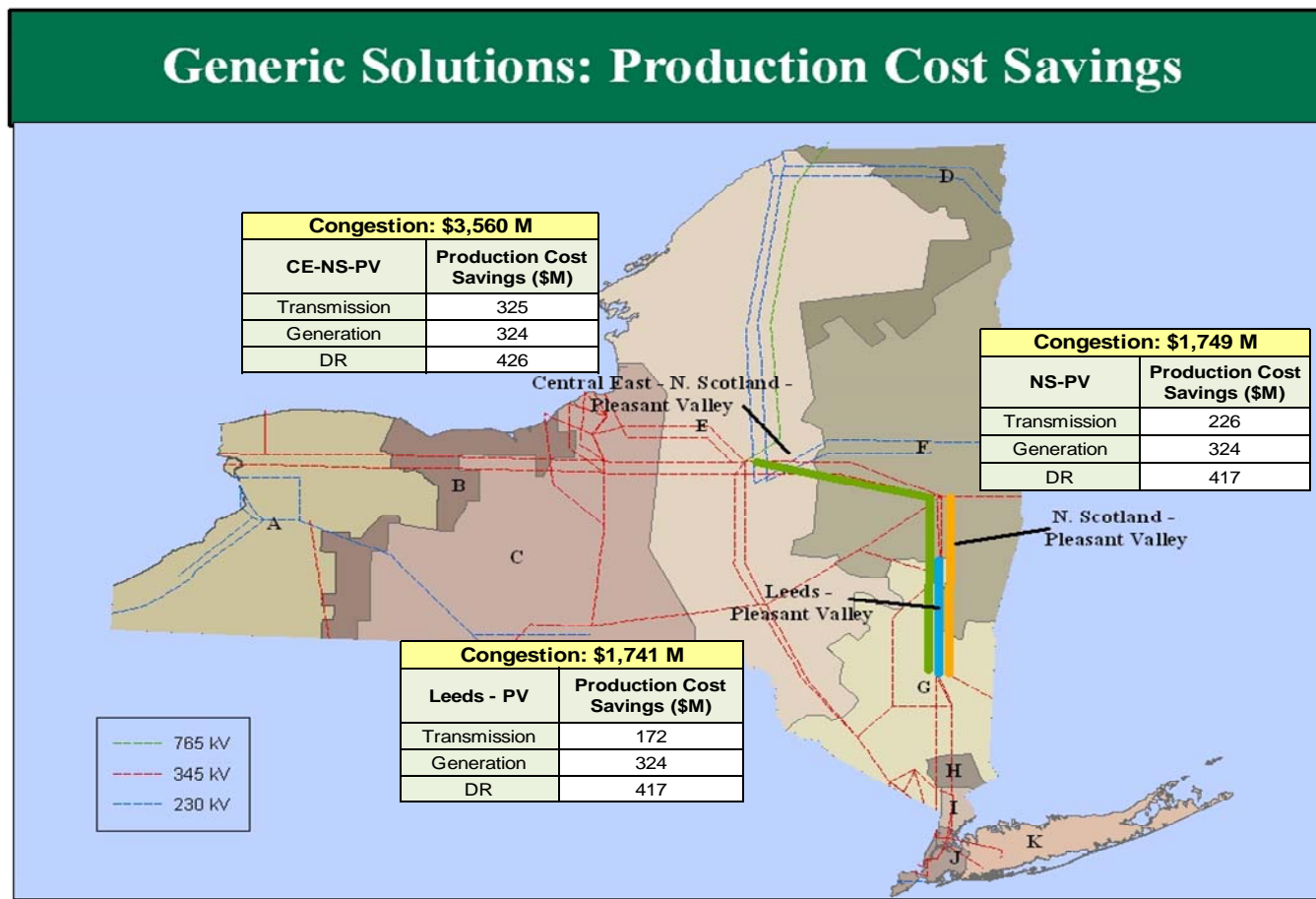
Generic Solution Costs (\$M)

Generic Solution Cost Summary (\$M)			
	Study 1:	Study 2:	Study 3:
Studies	Central East-New Scotland-Pleasant Valley	New Scotland- Pleasant Valley	Leeds - Pleasant Valley
Transmission			
Substation Terminals	Edic to New Scotland to Pleasant Valley	New Scotland to Pleasant Valley	Leeds to Pleasant Valley
Miles (# of terminals)	155 (3)	65 (2)	39 (2)
High	\$1,168	\$502	\$312
Mid	\$799	\$343	\$213
Low	\$322	\$139	\$87
Generation			
Substation Terminal	Pleasant Valley	Pleasant Valley	Pleasant Valley
# of 500 MW Blocks	2	2	2
High	\$1,988	\$1,988	\$1,988
Mid	\$1,622	\$1,622	\$1,622
Low	\$1,256	\$1,256	\$1,256
Demand Response			
Zone	F & G	G&I	G&I
# of 200 MW Blocks	2	2	2
High	\$672	\$754	\$754
Mid	\$540	\$605	\$605
Low	\$406	\$454	\$454

Production Cost Generic Solution Savings – Ten-Year Present Value (2011 \$M)

Study	Transmission Solution	Generation Solution	Demand Response Solution
Study 1: Central East-New Scotland-Pleasant Valley	325	324	426
Study 2: New Scotland to Pleasant Valley	226	324	417
Study 3: Leeds - Pleasant Valley	172	324	417

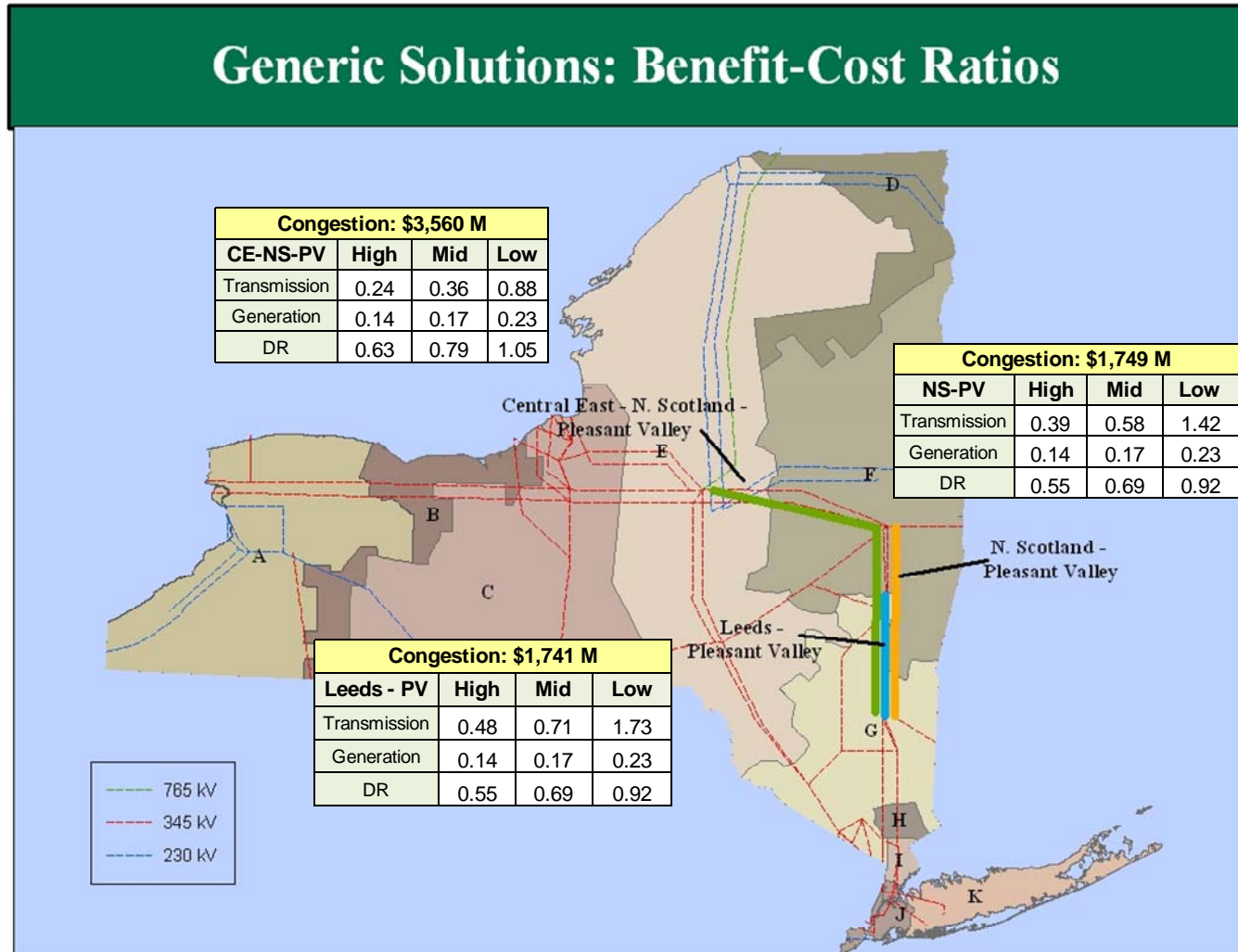
Production Cost Savings Present Value (\$M)



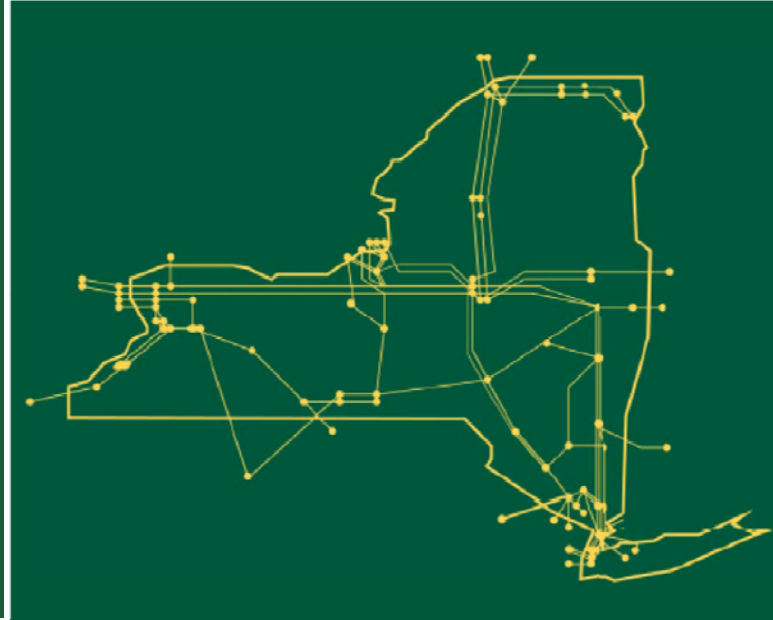
Benefit/Cost Ratios

Study	Cost Ranges	Benefit/Cost Ratios		
		Transmission Solution	Generation Solution	Demand Response Solution
Study 1: Central East-New Scotland-Pleasant Valley	High	0.24	0.14	0.63
	Mid	0.36	0.17	0.79
	Low	0.88	0.23	1.05
Study 2: New Scotland to Pleasant Valley	High	0.39	0.14	0.55
	Mid	0.58	0.17	0.69
	Low	1.42	0.23	0.92
Study 3: Leeds to Pleasant Valley	High	0.48	0.14	0.55
	Mid	0.71	0.17	0.69
	Low	1.73	0.23	0.92

Benefit/Cost Ratios



The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



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