



Houston Import Project Observations for the Technical Advisory Committee's Consideration

TAC Meeting

March 27th, 2014



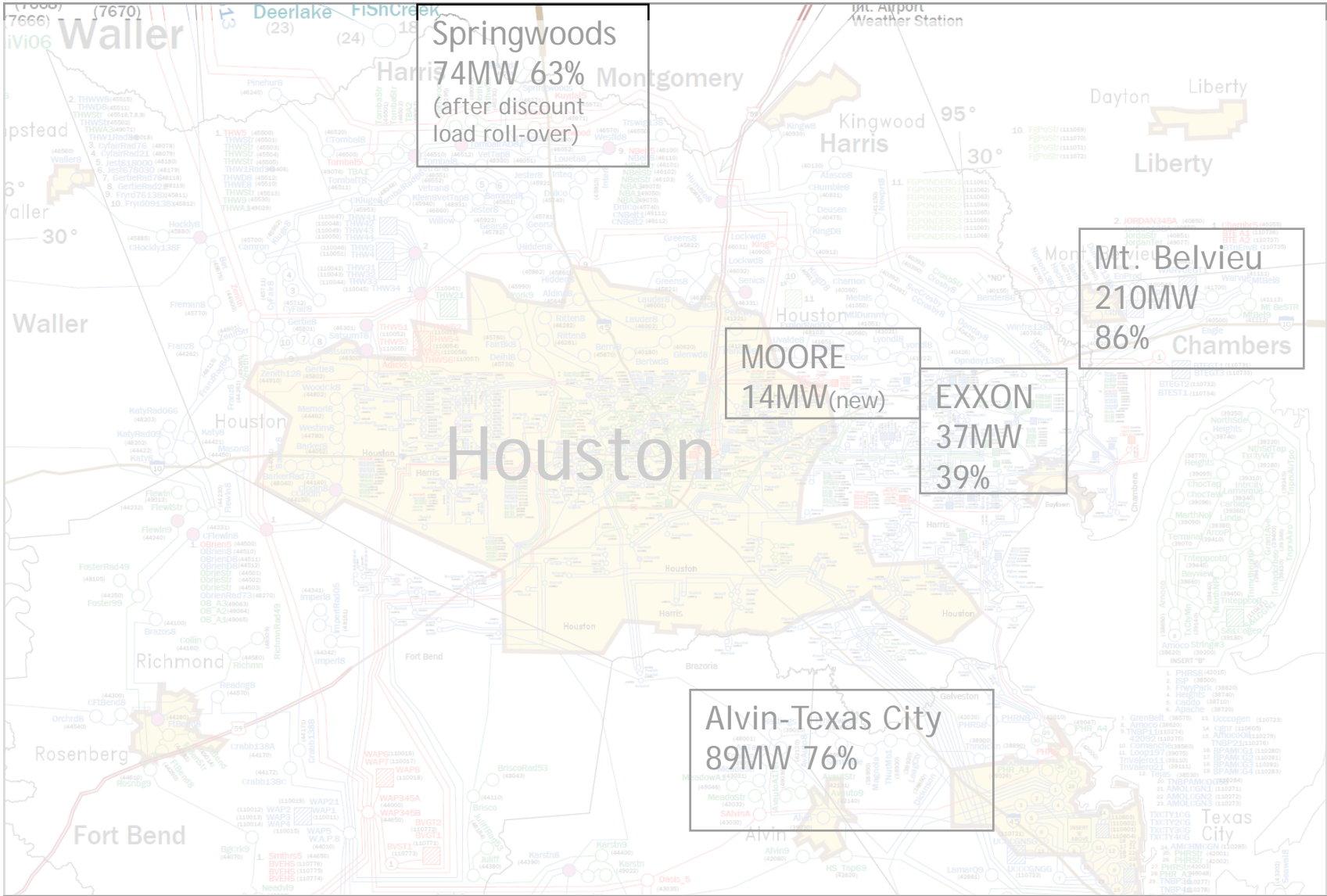
CLEAN MODERN EFFICIENT FLEXIBLE POWER GENERATION

Overview

Calpine asks the Technical Advisory Committee to consider two significant issues that have recently surfaced relative to the Houston Import Project:

- 1) Several load buses in the 2018 SSWG's Base Case show very large percentage changes from the 2014 peak loads for those buses; percentage changes that are unlikely to be residential or commercial development and are likely industrial development requiring cogeneration development not accounted for in the HIP studies,
- 2) ERCOT's latest CDR shows the Pondera King Power Project's capacity available for 2018 yet it is not considered in the HIP studies.

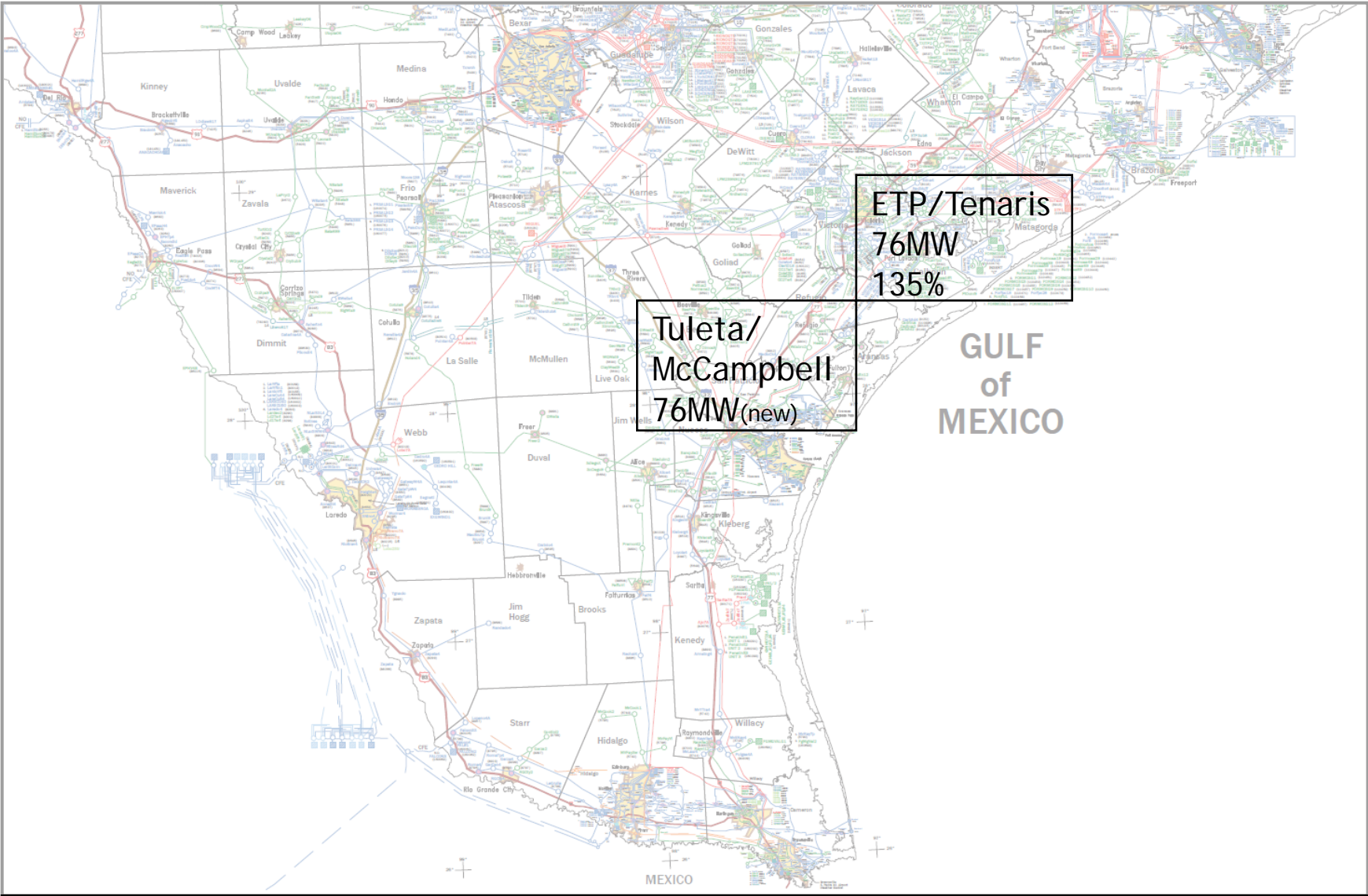
Possible Cogen Load Locations in Houston (\$SWG 2018 vs. 2014)



Bus List of Possible Cogen from SSWG 2018 vs. 2014

Bus #	Bus Name	2018 Load (MW)	2014 Load (MW)	18 vs. 14 change	% changed	Region
38920	TNLEAGCITY1	123	101	22	22%	Alvin-Texas City
38990	TNSEMINOLE1	45	31	14	46%	Alvin-Texas City
38900	TNHDNLAKES1	22	0	22		Alvin-Texas City
38930	TNUTMB____1	20	0	20		Alvin-Texas City
38830	TNMAINLAND1	11	0	11		Alvin-Texas City
39015	TNNALVIN__1	11	0	11		Alvin-Texas City
40570	EXXON____138A	131	94	37	39%	EXXON
40555	MOORE____138X	14	0	14		MOORE
40665	CONNOR__138X	25	1	24	2370%	Mt. Belvieu
41611	TRNITY__138B	32	8	24	281%	Mt. Belvieu
40764	WINFRE__138X	53	30	23	78%	Mt. Belvieu
41111	MT_BEL__138A	129	95	34	36%	Mt. Belvieu
40760	NORTON__138X	77	51	26	50%	Mt. Belvieu
40770	HACHER__138X	80	47	33.00	71%	Mt. Belvieu
41610	TRINTY__138A	61	14	47.00	338%	Mt. Belvieu
46270	SPRINGWOODS	212	130	82	64%	Springwoods
Total		1046	602	444	74%	

Possible Cogen Load Locations in South WZ (SSWG 2018 vs. 2014)



Bus List of Possible Cogen in South WZ (SSWG 2018 vs. 2014)

Bus #	Bus Name	2018 Load (MW)	2014 Load (MW)	18 vs. 14 change	% changed	Region
5523	ETPSUB8	98	56	42	43%	ETP/Tenaris
5562	TENARISSUB8	34	0	34		ETP/Tenaris
8590	TULETA4EA	38	0	38		Tuleta/ McCampbell
80470	MCCAMPB4	38	0	38		Tuleta/ McCampbell
Total		208	56	152	271%	

Pondera King Power Project

From the Winter 2014 CDR

SITE_NAME	GINR_NUM	UNIT_CODE	COUNTY	FUEL	ZONE	YEAR	2014	2015	2016	2017	2018
New Resources with Signed IA and Air Permit											
PANDA SHERMAN CTG1	10INR0021	PANDA_S_SHER1CT1	GRAYSON	GAS	NORTH	2014	-	192.8	192.8	192.8	192.8
PANDA SHERMAN CTG2	10INR0021	PANDA_S_SHER1CT2	GRAYSON	GAS	NORTH	2014	-	192.8	192.8	192.8	192.8
PANDA SHERMAN STG	10INR0021	PANDA_S_SHER1ST1	GRAYSON	GAS	NORTH	2014	-	334.7	334.7	334.7	334.7
PANDA TEMPLE CTG1	10INR0020a	PANDA_T1_TMPL1CT1	BELL	GAS	NORTH	2014	-	191.2	191.2	191.2	191.2
PANDA TEMPLE CTG2	10INR0020a	PANDA_T1_TMPL1CT2	BELL	GAS	NORTH	2014	-	191.2	191.2	191.2	191.2
PANDA TEMPLE STG	10INR0020a	PANDA_T1_TMPL1ST1	BELL	GAS	NORTH	2014	-	334.7	334.7	334.7	334.7
DEER PARK ENERGY CENTER	14INR0015	DDPEC_GT6	HARRIS	GAS	HOUSTON	2014	-	165.0	165.0	165.0	165.0
FERGUSON REPLACEMENT CTG1	13INR0021	FERGCC_FERGCT1	LLANO	GAS	SOUTH	2014	-	161.9	161.9	161.9	161.9
FERGUSON REPLACEMENT CTG2	13INR0021	FERGCC_FERGCT2	LLANO	GAS	SOUTH	2014	-	161.9	161.9	161.9	161.9
FERGUSON REPLACEMENT STG	13INR0021	FERGCC_FERGST1	LLANO	GAS	SOUTH	2014	-	186.0	186.0	186.0	186.0
TEXAS CLEAN ENERGY PROJECT	13INR0023		ECTOR	COAL	WEST	2018	-	-	-	-	-
PANDA TEMPLE II	10INR0020b		BELL	GAS	NORTH	2015	-	-	717.0	717.0	717.0
PONDERA KING POWER PROJECT	10INR0022		HARRIS	GAS	HOUSTON	2018	-	-	-	-	1,468.6

From the ERCOT Planning Update to the RPG on 1/21/2014

Study Base Case	
<ul style="list-style-type: none"> - Total Load in Coast Weather Zone in the 2018 SE case <ul style="list-style-type: none"> • ~ 26,355 MW (CNP load = ~ 22800 MW) • The load is identical to the SSWG case load in the Coastal weather zone - Status of future generators in the study case <ul style="list-style-type: none"> Online: <ul style="list-style-type: none"> - Deer Park Energy G6, Channel Energy GT3, - Deepwater Energy, Offline: <ul style="list-style-type: none"> - New W.A. Parish unit, Pondera King, Cobisa 	

Our Conclusions

- 1) If you believe that the bus load growths we've identified are likely industrial development and will require power and/or steam, then you should also believe that they will be supplied locally and not from the North Central Weather Zone. New cogeneration development in the Houston Area will be needed to match these loads yet no such assumption was used in the HIP studies.
- 2) It may be useful to exclude the Pondera King Power Project from the HIP studies in order to support an apparent need for new North-Houston transmission, and it may also appropriate to include that same facility in the CDR for resource adequacy purposes but doing both raises an obvious question about the discontinuity between resource adequacy planning and transmission planning.

