

# St. Albans Area Study/SAAS

Results Review:

CVPS & VELCO

May 26<sup>th</sup>

# SAAS

- Load Forecast
- Transmission Analysis
- Proposals
- Quick Proposal Review
- Future Process
- Other

# Regional Forecast

## Recent CELT Update

Includes Historical ODR

VT

SUMMER

	90%	80%	70%	60%	50%	40%	30%	20%	10%	5%
2009	1045	1050	1055	1065	1075	1090	1095	1115	<b>1120</b>	1130
2010	1055	1060	1065	1075	1085	1100	1105	1125	<b>1130</b>	1140
2011	1070	1075	1080	1090	1100	1115	1120	1140	<b>1145</b>	1160
2012	1085	1090	1095	1105	1115	1130	1135	1155	<b>1165</b>	1175
2013	1095	1100	1105	1115	1125	1140	1145	1165	<b>1175</b>	1185
2014	1105	1110	1115	1125	1135	1150	1155	1175	<b>1190</b>	1200
2015	1120	1125	1130	1140	1150	1165	1170	1190	<b>1205</b>	1215
2016	1130	1135	1140	1150	1160	1175	1180	1205	<b>1215</b>	1225
2017	1140	1145	1150	1160	1170	1185	1190	1215	<b>1225</b>	1240
2018	1145	1155	1160	1170	1180	1195	1200	1225	<b>1235</b>	1250

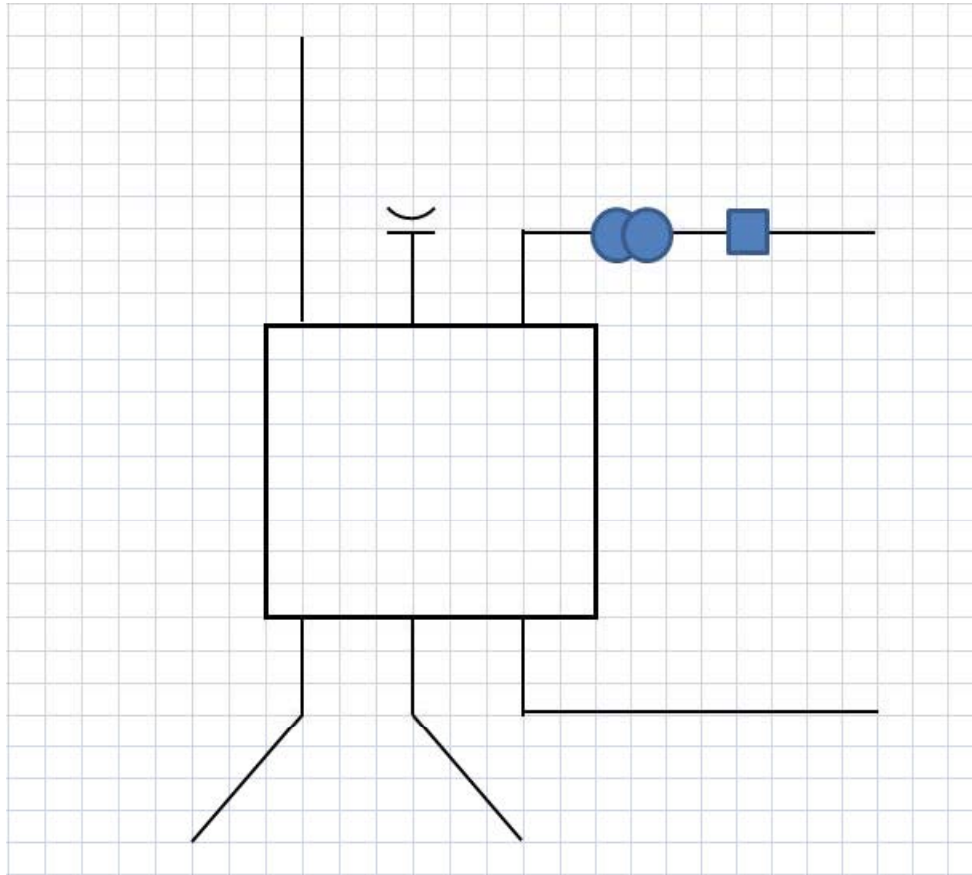
# Load Forecast Comparison

	<b>2009 CELT Rev</b>			<b>2008 CELT</b>	
	<b>NE</b>	<b>VT</b>		<b>NE</b>	<b>VT</b>
2009	29775	1120		30475	1165
2010	30110	1130		31015	1185
2011	30580	1145		31525	1200
2012	31075	1165		31995	1220
2013	31470	1175		32410	1235
2014	31900	1190		32775	1245
2015	32305	1205		33085	1255
2016	32635	1215		33360	1265
2017	32950	1225		33595	1275
2018	33235	1235			

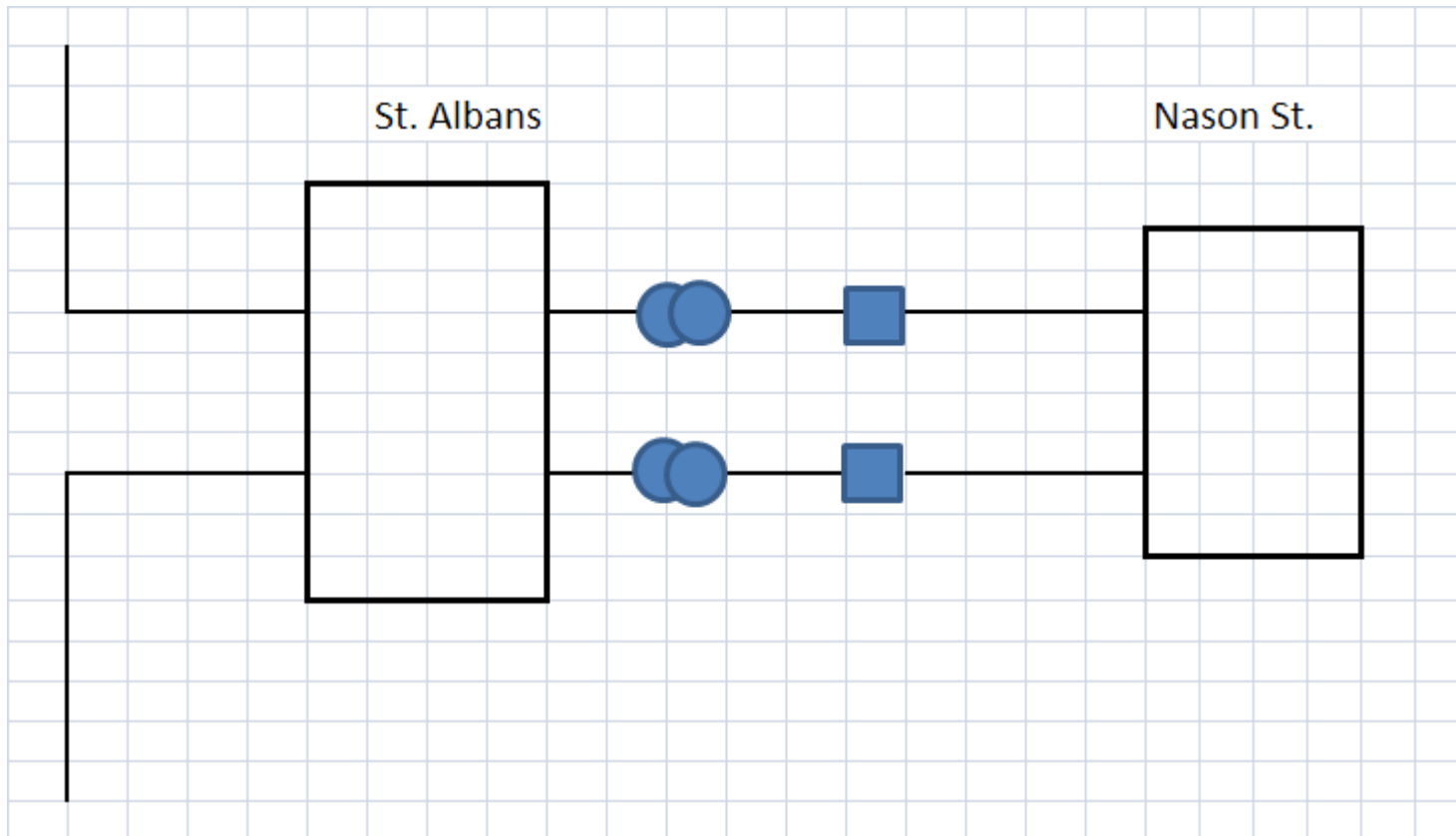
# Transmission Analysis

- Screen Only 115 kV and above Facilities
  - Include loss of transformer from 115 kV to lower voltage systems
  - Monitor Sub-transmission Performance
- LTE Rating for thermal screening
- 0.95 per unit voltage post contingency (115 kV and above)
- Focus Areas
  - St. Albans
  - Georgia tap
  - East Fairfax
  - Other: Sub-transmission to Irasburg

# Conceptual Georgia



# Conceptual St. Albans



# Review

- TSIS → Best Choice?
  - Appears to better support the underlying sub-transmission system
  - Defers St. Albans transformation capacity upgrade
- Second 115 kV line: Longer Term
  - Better support 115 kV system
  - May lead to improved Highgate interconnection upgrade



# Alternative

1. Rebuild Georgia tap Substation due to breaker failure/no solution (voltage collapse)
2. Third Source In the South and
3. Second 115 kV line from Georgia tap to St. Albans

# Alternative

- Defer St. Alban Upgrade Alternative
  - Monitor Load Forecasts
- Georgia tap
  - Rebuild to Breaker and Half Scheme
  - Allow for expansion (new line north/second Transformer)
  - Other
- Regional Issues Longer Term
  - Second Line and beyond
  - Highgate/Convertor Interconnection

# Conceptual Cost Estimate

Option	115 kV station costs	site work & control house	34.5 kV transformer	34.5 kV station costs	34.5 kV trans line	34.5 kV portion of site work	115 kV portion of site work	PTF cost	non-PTF cost	other costs	total costs
St. Albans	5.5	3.5	11	1.5	1	0.75	2.75	8.25	14.25	12	34.50
Georgia	8	4	5.5	1	1	0.44	3.56	11.56	7.94	0	19.50

Note : Costs of subtransmission upgrades beyond substation not included