IEP Financial Model Analysis - AIDEA Board Meeting

November 18, 2013



INTERIOR ENERGY PROJECT FINANCIAL MODEL

- Comprehensive financial model developed by AIDEA's head of SETS program
- Vetted by comparison to proposers' models
- Multiple scenarios tested

Key Model Assumptions for Term Sheets

- 1. SETS loan payments include principal and no interest for the first five years
- 2. Prices are levelized (averaged) for the first five years and may change in later years
- 3. While all term sheets require an expandable plant, this analysis assumes no expansions
- 4. To lower project cost and risk, AIDEA's model funds the first \$35 million of AIDEA investment with the capital appropriation even if not sought in the term sheet
- 5. All SETS funds not used for the LNG Plant are used in the distribution system to replace higher cost debt (estimated at 5% or higher)
- 6. LNG will be trucked by trucks using diesel fuel (higher cost) until LNG tractors are available

Pentex Term Sheet key assumptions and analysis

- 1. \$20 million equity provided by Pentex with a nominal rate of return of 12.5% after realized tax burden with no taxes assumed in first five years
- 2. \$10 million private debt financed at 8% interest
- 3. 11% weighted rate of return on private investment (debt and equity)
- 4. Debt and equity principle paid back over 12 years
- 5. \$6.5 million annual non-fuel O&M cost
- 6. LNG liquefaction process requires 10.5% fuel gas

Spectrum Term Sheet key assumptions and analysis

- 1. \$20 million equity provided by Spectrum with a nominal rate of return of 25% post individual tax burden regardless of actual tax burden
- 2. No private debt financing
- 3. 25% weighted rate of return on private investment (all equity)
- 4. Equity principle paid back over 12 years
- 5. \$9.0 million annual non-fuel O&M costs
- 6. LNG liquefaction process requires 6.0% fuel gas





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MWH Term Sheet key assumptions and analysis

- 1. \$21 million equity provided by investor with a nominal rate of return of 20% post corporate tax burden regardless of actual tax burden
- 2. \$39 million private debt financed at 8% interested
- 3. 12.2% weighted rate of return on private investment (debt and equity)
- 4. Debt and equity principle paid back over 30 years (contingent on matching LNG sales commitments)
- 5. \$9.1 million annual non-fuel O&M cost
- 6. LNG liquefaction process requires 10.5% fuel gas

Table 1: Capital Stack \$MM

	Pentex	Spectrum	MWH
AIDEA Contribution	\$35.0	\$35.0	\$35.0
AIDEA SETS	\$110.0	\$84.9	\$90.0
Debt	\$10.0	\$0.0	\$53.7
Equity	\$20.0	\$20.0	\$28.9
Total	\$175.0	\$139.9	\$207.6

Natural gas demand key assumptions

- 1. Industrial customers, including GVEA, demand 3 Bcf per year
- 2. Natural gas utilities' demand will grow over time
- 3. AIDEA expects the LNG plant to expand to meet demand but in this analysis it is not expanded and demand is capped
- 4. The LNG plant provides seasonal swing to natural gas utilities so a 9 Bcf plant is capable of supplying 6.6 Bcf per year

Table 2: Natural Gas Demand (Bcf per year)

	2016	2017	2018	2019	2020
Industrial (includes GVEA)	3.0	3.0	3.0	3.0	3.0
Natural Gas Utilities	1.9	3.3	3.3	3.3	3.3
Total	4.9	6.3	6.3	6.3	6.3





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Annual IEP costs & projected LNG prices

- 1. All prices are levelized (averaged) for five years
- 2. Annual costs are a five year average
- 3. Distribution costs are estimated separately from the term sheet analysis and should be expected to change
- 4. Prices apply to all preferred customer

Table 3: Annual Cost \$MM

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	Pentex	Spectrum	MWH
Raw Gas	\$21.1	\$21.1	\$21.1
Fuel Gas	\$2.5	\$1.3	\$2.5
Operating Costs	\$6.5	\$9.0	\$9.1
AIDEA SETS Loan	\$3.7	\$2.6	\$3.0
Private Investment	\$5.3	\$5.8	\$10.6
Total	\$38.9	\$39.9	\$46.2

Table 4: Cost Components \$/Mcf

	Pentex	Spectrum	MWH
Raw Gas	\$3.30	\$3.30	\$3.30
Fuel Gas	\$0.39	\$0.21	\$0.39
Operating Costs	\$1.01	\$1.41	\$1.43
AIDEA SETS Loan	\$0.57	\$0.41	\$0.47
Private Investment	\$0.82	\$0.91	\$1.66
Trucking	\$5.01	\$5.01	\$5.01
Distribution	\$4.21	\$4.14	\$4.15

Table 5: Gas Price \$/Mcf

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	Pentex	Spectrum	MWH
FOB NS Plant	\$6.09	\$6.25	\$7.24
Delivered to FBX	\$11.10	\$11.26	\$12.25
At the Meter	\$15.31	\$15.40	\$16.40







IEP ESTIMATED HOUSEHOLD SAVINGS

Table 6: Household Annual Fuel Costs by Month

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	Pentex	Spectrum	MWH	Fuel Oil
Jan	\$454	\$456	\$486	\$889
Feb	\$381	\$383	\$408	\$747
Mar	\$340	\$342	\$365	\$667
Apr	\$209	\$211	\$224	\$410
May	\$116	\$117	\$125	\$228
Jun	\$61	\$61	\$65	\$120
Jul	\$52	\$53	\$56	\$103
Aug	\$81	\$82	\$87	\$160
Sep	\$140	\$140	\$150	\$274
Oct	\$262	\$263	\$280	\$513
Nov	\$375	\$377	\$402	\$735
Dec	\$436	\$439	\$467	\$855
Total	\$2,909	\$2,925	\$3,116	\$5,700

Table 7: Household Annual Savings by Month

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	Pentex	Spectrum	MWH
Jan	\$435	\$433	\$403
Feb	\$366	\$363	\$338
Mar	\$327	\$325	\$302
Apr	\$201	\$200	\$186
May	\$112	\$111	\$103
Jun	\$59	\$58	\$54
Jul	\$50	\$50	\$47
Aug	\$78	\$78	\$72
Sep	\$134	\$133	\$124
Oct	\$251	\$250	\$233
Nov	\$360	\$358	\$333
Dec	\$419	\$416	\$388
Total	\$2,791	\$2,775	\$2,584

Household fuel cost and savings notes:

- 1. Households estimated to use 190 Mcf of gas annually
- 2. Fuel oil costs \$4.00 per gallon (\$30.00 per Mcf equivalent)
- 3. Includes all costs to deliver gas to the meter



