

Summary Expert Evidence of Paul Chernick

President, Resource Insight, Inc.

R-3867-2013 PHASE 3B

11 APRIL 2018

Issues for R-3867-2013 Phase 3B

1. Why line-extension methodology matters
2. Evaluation Life
3. Upstream Capacity Costs
4. Overhead Costs
5. Énergir Discretion

1. Why profitability analysis matters

- ❖ Line-extension profitability is essential for rationally determining when and where Énergir should expand its systems.
- ❖ To benefit existing customers, an extension must produce enough revenue to cover its costs, the costs of serving the new customers and the costs of capacity upgrades for the new load.

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2. Evaluation Life

- ❖ Assuming continuing revenues for 40 years is very optimistic
- ❖ Overstates benefits of line extensions
- ❖ The main may remain in place, but the customer may be gone
- ❖ Or the customer may still be there, but most of the load may be gone

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2. Evaluation Life

❖ Drivers

❖ Decarbonization

- ❖ The shift from gas to renewables has not yet occurred
- ❖ But it is inevitable, to limit global warming
- ❖ Énergir extrapolates from the 2010s to assume that the shift will not occur in the 2030s and 2040s

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2. Evaluation Life

Customer shutdown

- ❖ Énergir data indicates 1.5% to 1.8% of large customers shut down each year
- ❖ Data referenced in Régie discovery is difficult to interpret, due to tariff switching

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2. Evaluation Life

- ❖ **Reducing life from 40 years to 25 years:**
Reduces present-value of revenue by about 20%
- ❖ **Énergir ignores the unamortized cost at year 40:**
Remaining cost should be written off at end of evaluation life

7

2. Evaluation Life—Énergir Response

1- Other Utilities use 40 years for some purposes

- ❖ Mr. Feingold's presentation: five utilities using valuation period, two use 20 years for large/industrial customers, one uses 10 years for residential & commercial
- ❖ Mr. Feingold lists Interstate P&L as "not applicable"
IP&L uses 3-year payback (ignoring operating expenses)
IP&L also uses 20-year valuation, the Iowa standard approach
- ❖ So three of six utilities use 20 years for all or some projects

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2. Evaluation Life—Énergir Response

- ❖ Some regulators recognize that load should not be assumed to continue for 40 years
- ❖ Those that assume 40 years may not have considered the difference between equipment life and load life

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2. Evaluation Life—Énergir Response

2—Assumes that some contracted load disappears

- ❖ 5% for residential
- ❖ 15% for larger customers
- ❖ Lower than the effect of assuming a shorter life
- ❖ Only applied to portfolio, not project
 - ❖ So profitable projects subsidize losers
 - ❖ Ratepayers are worse off than they would be with only profitable projects
 - ❖ Leads to excessive reliance on gas

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2. Evaluation Life—Énergir Response

3—Review after six years

- ❖ Helpful for revising densification assumptions
- ❖ Helpful for checking cost assumptions
- ❖ Not helpful in refining assumed duration of sales
- ❖ Not helpful in imposing discipline on Énergir

11

2. Evaluation Life Recommendation

- ❖ 25 years is best estimate
- ❖ Investment should be fully amortized
- ❖ If the life used is longer than 25 years, the required PI should be higher than 1.0 for each project and higher than 1.1 for the portfolio

12

3.Upstream Capacity Costs

- ❖ Adding load requires capacity expansions
- ❖ Not usually linked to a single line extension
- ❖ More load means more capacity expansion
- ❖ Énergir includes all the expected base revenues, but not all the expected costs

13

3.Upstream Capacity Costs- Recommendation

- ❖ Énergir should include an allowance for expected future delivery capacity costs: $\$/\text{m}^3\text{-day}$ of design peak
- ❖ Compute as historical or planned capacity investment divided by growth in design peak over the same period

14

4.Énergir Overhead Costs

More projects require more overhead activities:

- ❖ procurement
- ❖ legal work
- ❖ public relations
- ❖ labour (and hence personnel, human relations...)
- ❖ financing

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4.Énergir Overhead Costs

Énergir includes these costs for portfolio, but not for projects

- ❖ Profitable projects subsidize losers
- ❖ Ratepayers are worse off, paying to lock new customers into uneconomic gas use
- ❖ Wasteful projects are built

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4. Contractor Overhead Costs

More line extensions require:

- ❖ More contractors
- ❖ Larger commitments

Énergir points out that these contracts are signed for 3–5 year terms :

- ❖ Pipeline supply contracts are signed for much longer than 5 years
- ❖ The Énergir method treats those costs as varying with usage, and not fixed.
- ❖ Énergir forecast need for contractors, and decisions about contracts, should reflect construction plans

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4. Overhead Costs - Recommendation

- ❖ Include overheads in PI analysis
- ❖ Énergir overheads as adder on Énergir labour and/or purchases
- ❖ Contractor overheads as adder on contractor payments

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5. Énergir Seeks to Retain Discretion

- ❖ **To subsidize projects with ratepayer funds**
- ❖ Choosing to relax the profitability ratio target to 0.8
- ❖ Based on vague densification criterion
- ❖ Can send staff to find more potential growth, to justify using 0.8 ratio
- ❖ Customer hopes for expansion
- ❖ Municipal development aspirations
- ❖ Other oil or propane customers in area
- ❖ Example of requiring 1.0 ratio:
- ❖ Project ends at a cliff, precluding additional load

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5. Énergir Seeks to Retain Discretion

Building out a potential industrial park

- ❖ Without knowing which customers will move in, or when, or how much gas they will use

Installing a main under a road that is being resurfaced

- ❖ Without any specific sales prospects

Internal review serves management and owner interests in building rate base, business size

- ❖ Not public interest in minimizing cost and environmental damage

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5. Recommendation on Énergir Discretion

The Régie should require that Énergir file specific protocols for determining:

- ❖ Whether the densification potential justifies the 0.8 target PI
- ❖ Whether industrial-park development expectations justify buildout with customer funds
- ❖ Whether load is likely to pay for installing an extension under a road being resurfaced

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