

## Jean Jewell

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**From:** Ed Howell  
**Sent:** Tuesday, November 09, 2004 7:56 AM  
**To:** Jean Jewell; Ed Howell; Gene Fadness; Tonya Clark  
**Subject:** Comment acknowledgement

WWW Form Submission:

Tuesday, November 09, 2004  
7:55:36 AM

Case: IPC-E-04-18  
Name: Erik Lytikainen c/o Dennis Finn  
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Company: comments directed to Idaho Power Co.  
mailing\_list\_yes\_no: yes  
Comment\_description: My comments relate to the 88 MW block of peaking power included in the IRP.

Serious consideration should be given to adding to the list of generation technologies reciprocating engine technology.

The list of combustion turbine advantages provided on page 53 of the IRP is more than matched by modern reciprocating engine technology, in that modern reciprocating engine technology provides:

- much better heat rate than simple cycle GTs, 8725Btu/kWh vs the listed GT heat rate of 10,467 Btu/kWh
- matches GT air emissions
- uses no water for making emissions commitments or for making rated output capacity
- does not derate at your site altitude and ambient air temperature conditions
- provides better incremental size match to future load growth
- provides much better part load heat rates than the CTs
- provides much better load following characteristics than the CTs
- provides faster start-up characteristics than the CTs in that the reciprocating engine technology can demonstrate 10 minute from plant shutdown to plant full load output timespans, and can start and stop several times each day without affecting maintenance hours/costs
- Specifically on CO2 emissions which were listed as an "advantage of GT technology" the modern reciprocating engine technology is in the area of 440 grams/kWh CO2 emission level while the GTs are in the area of 565grams/kWh CO2 emission level
- modern reciprocating engine dual fuel technology provides the possibility of using B100 biodiesel as a secondary fuel to natural gas to provide fuel flexibility and to provide a renewable generation asset

I urge Idaho Power and Idaho PUC to include modern reciprocating engine technology as a suitable technology to be evaluated in determining the most economic technology for providing intermediate and peaking power generation.

Regards,

Erik Lytikainen, Royall Energy, Inc.

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