Energy Innovation program

Prawn & Barramundi Conference Gold Coast

Phil Shorten, Associate, Energetics  31 July 2015
Some of our long term clients
We annually purchase >$1.5B per year for clients
What might prawn farms look like in 2020?

"Quite sustainably, with no additional use of land, we can use the water surface to power the water treatment facility. "In addition to that, because we’re so efficient, we’re able to export power to the township."
Typical energy innovation opportunities for aquaculture facilities

- Optimise pumping systems – VSDs etc
- Optimise refrigeration systems
- Optimise aeration systems
- On site energy generation – solar, wind, wave etc
- System upgrades and integration eg algae farms, water treatment and reuse facilities
The proposed APFA “energy innovation” program

Form a group of farmers with similar opportunities to

1) Reduce cost of production
2) Energetics estimates $1 to $8m industry savings
   • Derisk decisions
   • Reduce add on costs
The proposed APFA “energy innovation” program

Form a group of farmers with similar opportunities to

1) Optimise production volumes
The proposed APFA “energy innovation” program

Form a group of farmers with similar opportunities to

1) Lift environment credentials up another notch

Potential to strip 160-240,000 tonnes Co2 from our industry

20% savings supports Australia’s national target of 26% by 2030
The challenge ahead.....

30 odd prawn farmers and
Many participants circling the table
What happens if we join a group and aggregate the savings?

- Business case and M&V paid for by ERF / ESPP / RECS
- Better buying power,
- On billing options,
- Better cash flows from extended terms
- Better after sales service from successful tenderers
- First auction ERF price of $13.95 per tonne (average)
- RECS recent prices $19-22 MW
- 10 solar pumps are cheaper than one
- No capital up front for certain technologies eg solar
- Banks offer EE loans
- CEFC may extend terms $10m
- Volume justifies support service providers
Why don’t farmers just get on with it?

What farmers are telling us…

• Don’t have the numbers….
• Don’t trust what suppliers tell me….
• Don’t have time…….

Government Incentives (ERF or RECS) will pay for the numbers, pay APFA to access suppliers and verify savings
The Energetics’ difference
We manage all elements and the interconnections

Gain control
Be informed
(Measure & manage data)

Continuously improve energy productivity

Buy better
Managing energy variables

Drive energy efficiency
Integrating into business systems
How might an APFA coordinated approach to energy productivity work?
Supporting efficiency investment
Client manages project, de-risks and gets development value

Project de-risking and development support

- Technology selection (CEM* certified analysis)
- Project approvals (DA’s, network approvals)
- Procurement & tendering (engineering, procurement & construct)
- Financial contracts (Debt, PPA’s)
- Service contracts (with energy performance parameters)
- Measurement and verification of outcomes (IPMVP* standards)
- Valuation, tender process and sale of assets

*Certified Energy Manager (CEM)

*International Performance Measurement & Verification Protocol
How you can join this group to reduce the cost of running your farm & retain or extend market share

APFA will send you an EOI one page form to register interest - just put your business card on the poster at the back of this room

thankyou
what have I go myself into.........

The daydreams of cat herders
Energetics core services – what we do

**BE LEADERS**
- Developing market-leading strategies
- Advisory services for governments on energy, carbon and sustainability issues
- Securing cost-effective project financing solutions
- Building energy and sustainability management skills

**BE INFORMED**
- Data integration and analytics
- Energy benchmarking and performance tracking
- Identifying energy cost savings through data management and bill validation
- Greenhouse gas and energy audits
- Mandatory and voluntary reporting that delivers business benefits

**BUY BETTER**
- Electricity, gas and fuel procurement
- Energy market review and strategy
- Sustainable procurement practices

**Improve your energy and carbon performance**
- Energy efficiency measures that deliver a competitive advantage
- Investigating and implementing renewable energy opportunities
- Off-grid energy generation for businesses

**BE EFFICIENT**
- Drive business operational and process efficiency
- Improved energy productivity
- Enhanced operational efficiency
- Technical assistance and expert advice
Global context – emissions

- China: 19.1%
- United States: 16.3%
- Russia Federation: 5.2%
- Brazil: 2.7%
- India: 4.9%
- Germany: 2.6%
- Japan: 3.0%

Emissions distribution:
- Emissions >6%: 2 countries = 37% of total
- Emissions >2%: 5 countries = 19% of total
- Emissions 1-2%: 14 countries = 20% of total
- Emissions <1%: rest of world (164 countries) = 24% of total

Source: Australian Government Department of Environment