



Energy Innovation program

Prawn & Barramundi Conference Gold Coast

Phil Shorten, Associate, Energetics 31 July 2015

energetics



Some of our long term clients

We annually purchase >\$1.5B per year for clients



MANUFACTURING



RESOURCES



RETAIL/ COMMERCIAL



GOVERNMENT



TRANSPORT



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

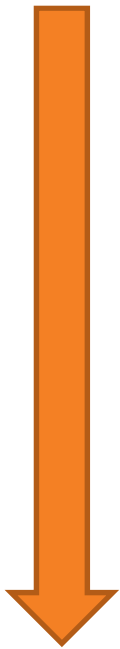


Form a group of farmers with similar opportunities to

1) Reduce cost of production

2) Energetics estimates \$1 to \$8m industry savings

- Derisk decisions
- Reduce add on costs

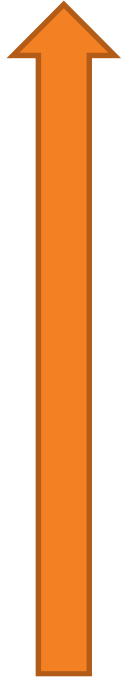


The proposed APFA “*energy innovation*” program



Form a group of farmers with similar opportunities to

1) Optimise production volumes



The proposed APFA “energy innovation” program

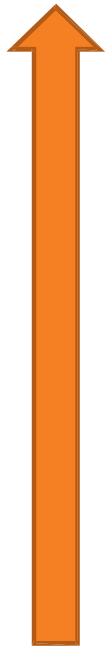


Form a group of farmers with similar opportunities to

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**



Queensland Government



Australian Government
Department of the Environment

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...

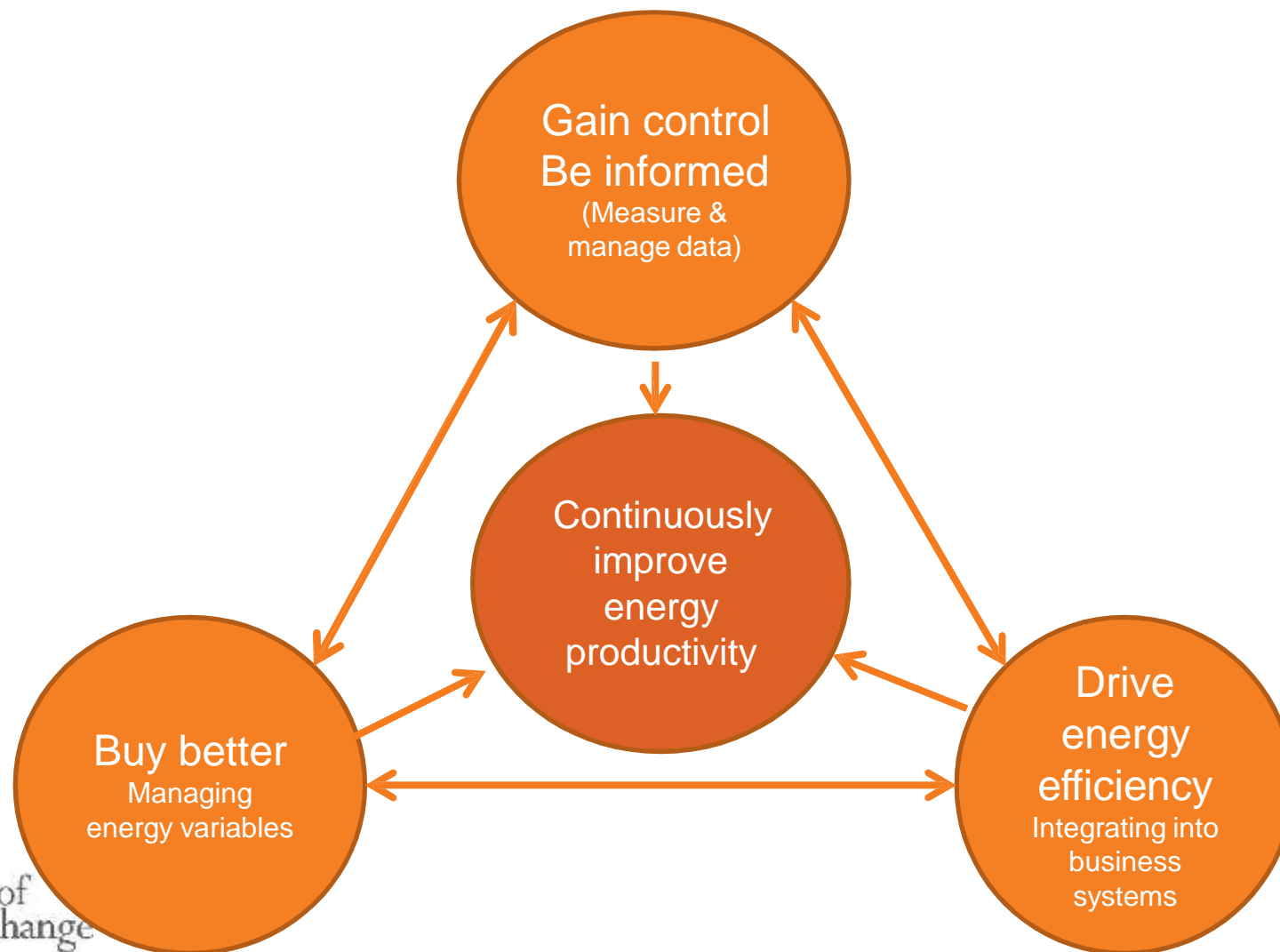
- Don't have the numbers....
- Don't trust what suppliers tell me....
- Don't have time.....

Government Incentives (ERF or RECS) will pay for the numbers, pay APFA to access suppliers and verify savings



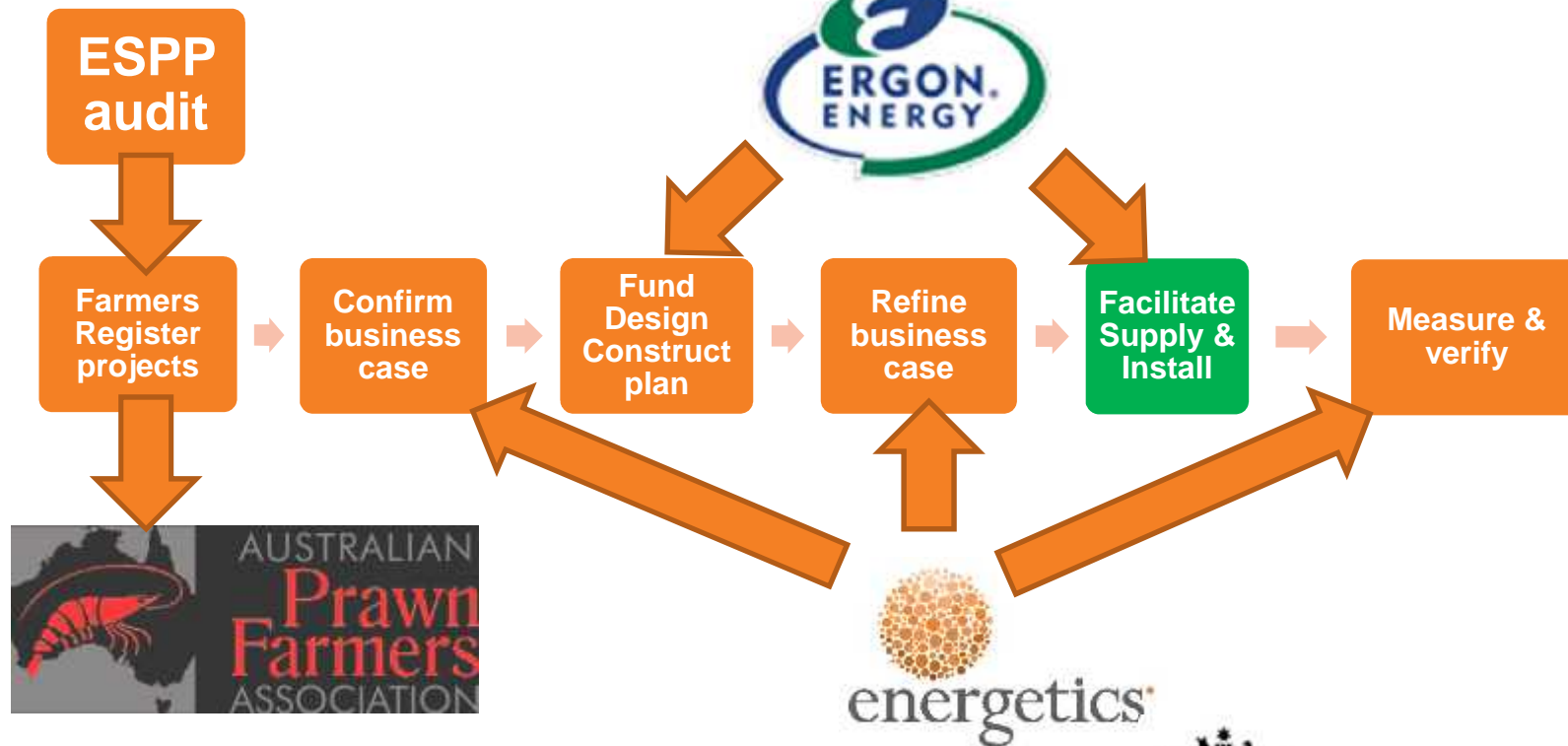
The Energetics' difference

We manage all elements and the interconnections



In the
business of
climate change

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**



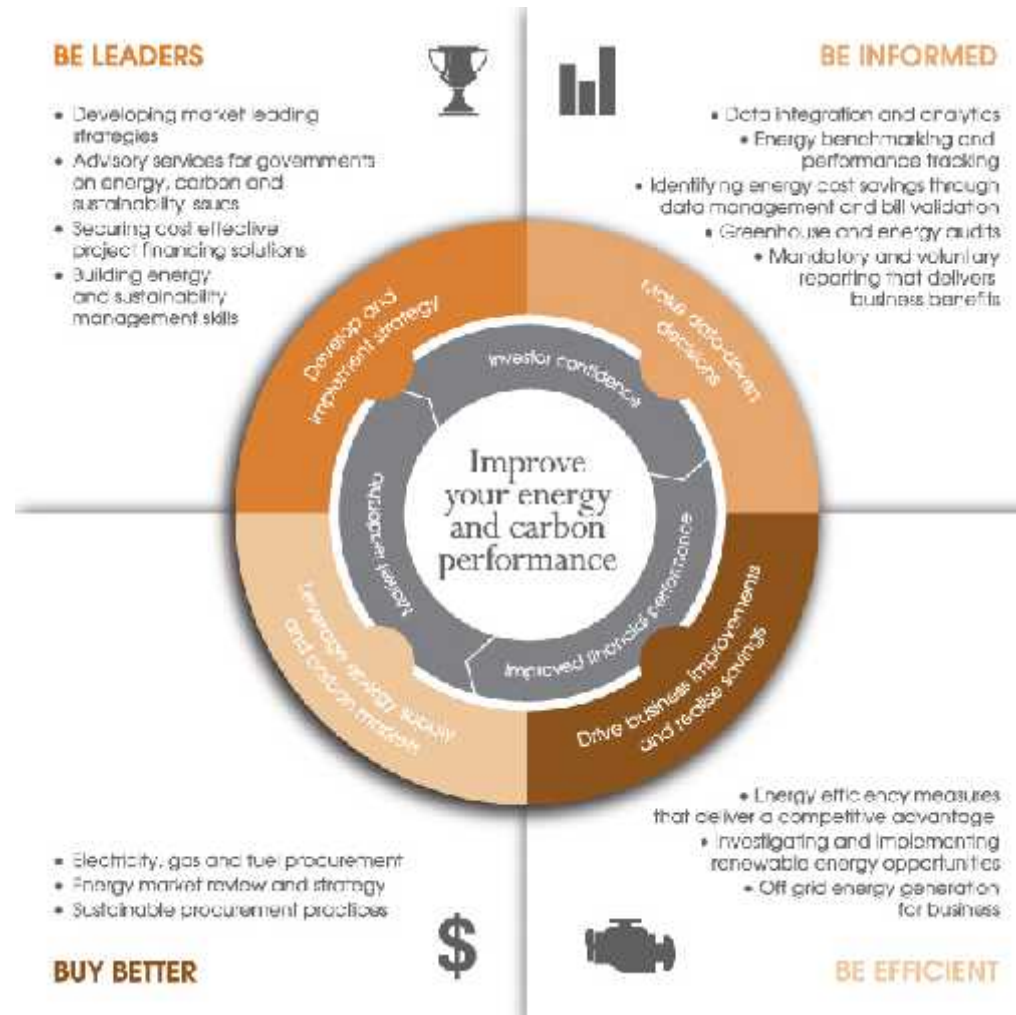
what have I go myself into.....



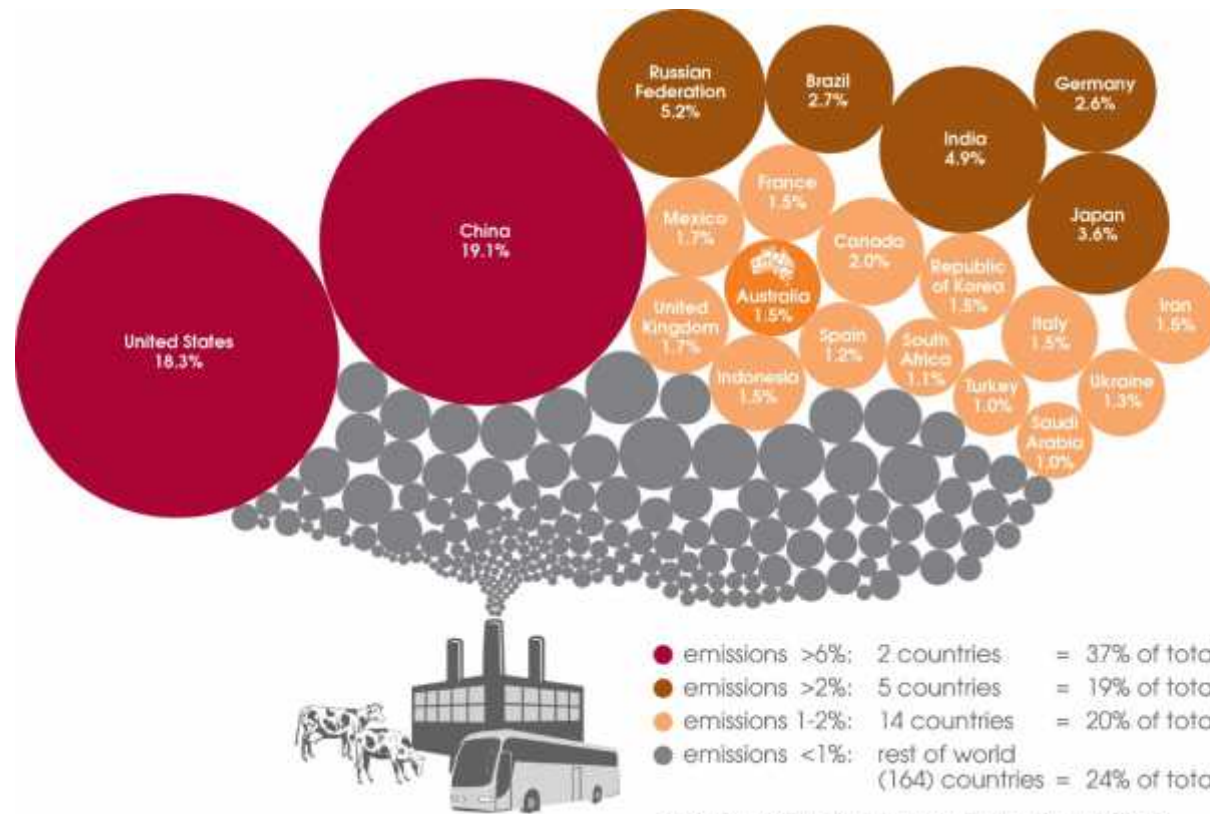
The daydreams of cat herders



Energetics core services – what we do



Global context – emissions



Source: Australian Government Department of Environment
<http://climatechange.gov.au/international/international-action/global-context-australias-place>



energetics^o