

# **ENERGY COSTS AND CHANGING BUSINESS PRACTICE IN AGRICULTURE**

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Australian Farm Institute  
Energy Consumers Australia Foresighting Forum 2018

# DIESEL GENERATION



- Electricity pumps preferable in terms of increased energy efficiency, reduced labour requirement for servicing and maintenance, however the cost of grid connection is rising and diesel is becoming a more cost effective option with farmers 'going backwards', reverting back to diesel generation for irrigation
- Shift back to diesel for operation of motors and pumps for irrigation is providing serious cost savings for full time & part time irrigators, processors and manufacturers
- Most cost efficient process however but not the most energy efficient; electric centrifugal pumps typically more efficient than diesel pumps (up to 40% more efficient)
- Diesel fuel rebate further incentivising producers to revert back to diesel

**Sector specific practice change – Cotton and Sugar**

# DIESEL GENERATION



- **Too Much**

- Impact on Business

- **Not Enough**

- Impact on Environment

# RENEWABLES – SOLAR



- Scale and storage capacity not there in terms of full reliance on off grid solution
- Massive opportunity to make renewable energy more permanent solution for agriculture
- Short term outlook is the adoption of a mix of grid sourced and renewable power for producers as scale and storage capacity not fully developed
- Far more favourable renewable energy environment as battery storage technology develops
- Despite strong developments of renewables in agriculture, shift is held back by lack of a strong Commonwealth or State governance framework
- Renewable developments in agriculture largely unsubsidised
- Challenges include high initial capital outlay & establishment time consuming, however attractive option and significant payback over long term

**Sector specific practice change – Poultry & Dairy**

# RENEWABLES – SOLAR



- **Too Much**
  - The technology
- **Not Enough**
  - Infrastructure and regulatory barriers for implementing technology

# RENEWABLES - BIOENERGY



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- Agriculture is an important biomass supplier, providing raw material for the production of bioenergy
- Used for power generation (electricity), heat applications or liquid fuels for transport
- Common sources include sugar cane residue, agricultural crop and livestock waste
- Topic of large amounts of research in Australian agriculture however limited development at commercial scale

**Sector specific practice change – Pork, Poultry & Sugar**

# RENEWABLES – BIOENERGY



- **Too Much**
  - No upside to intensive agriculture
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- **Not Enough**
  - How can intensive agriculture fit into the energy system