



**ASTATINE**  
Zero Carbon Solutions



# Farm Smart Utility Farmer Energy Opportunity

January 2021





## OUR VISION

Creating a truly sustainable world through technical, commercial and marketing innovation

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## PARTNERSHIP

- Utilizing our combined 60 years experience in the energy sector to partner with the rural community
  - Long-term co-investment approach with Dairy Co-ops & farmers in technical & commercial practical solutions
    - Project cost reduction from economies of scale
  - Continual partnership and investment in other projects to maximize rural engagement in the energy transition
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## OUR VALUES

### COLLABORATION

Building long-term partnerships with customers, suppliers and stakeholders to achieve our common goals

### INNOVATION

Pushing the boundaries and exploring new solutions

### URGENCY

Climate change requires urgent action, we are urgent in our drive to reduce carbon

### INTEGRITY

We are honest, open and fair.

# ASTATINE – WHO WE ARE



**TOM MARREN**  
*Co-founder & CEO*

- 28 years experience in the energy sector with strong technical and commercial focus
- Started and majority owner of decentralised power company Cogent Energy in Australia which was sold to Origin Energy (Mkt CAP 12.5B) in 2009
- Started and majority owner of renewable and energy services company CES Energy in Ireland which was sold to Centrica Plc (FT100) in 2019
- Developed and delivered a range of large scale energy projects using a variety of technologies across the globe.
- Energy board adviser into SGB in ME (Group Turnover \$25B)
- Finalist in the 2008 Ernst & Young Entrepreneur of the year
- Engineering degree from Trinity College, Dublin & MBA from University College, Dublin; completed the Leadership for Growth programme run by Duke Corporate Education (not-for-profit support corporation for Duke University)
- Tom is a highly respected energy advisor and has acted in this role for many large international companies.
- Tom has delivered keynote addresses at international energy conferences and is considered to be an industry leader in the field of energy generation and energy efficiency.



**PAUL DOWLING**  
*Co-founder & Advisor to CEO*

- Chartered Engineer and Chartered Director with over 30 years work experience in general management
- Currently working as Director and private investor in a number of companies such as StayCity, ElectroRoute, Island Renewables (Ireland) and Pioneer Green Energy (Texas)
- Previous roles include head of Strategy for SSE Group and Head of the renewable energy business for SSE
- Prior to this played a key role over a 10 year period founding & building the Airtricity business, making it a world leading renewable energy company in Europe and North America. The company was a retailer of Electricity in Ireland creating the Airtricity retail brand
- Successfully sold the Airtricity North American operations to EON for circa €900 million and then completed the sale of the rest of the company to SSE for €1,100 million
- Engineering degree from Dublin Institute of Technology, Dublin & MBA from Trinity College, Dublin
- Paul's specialties include: Renewable Energy, Strategy and Business Development

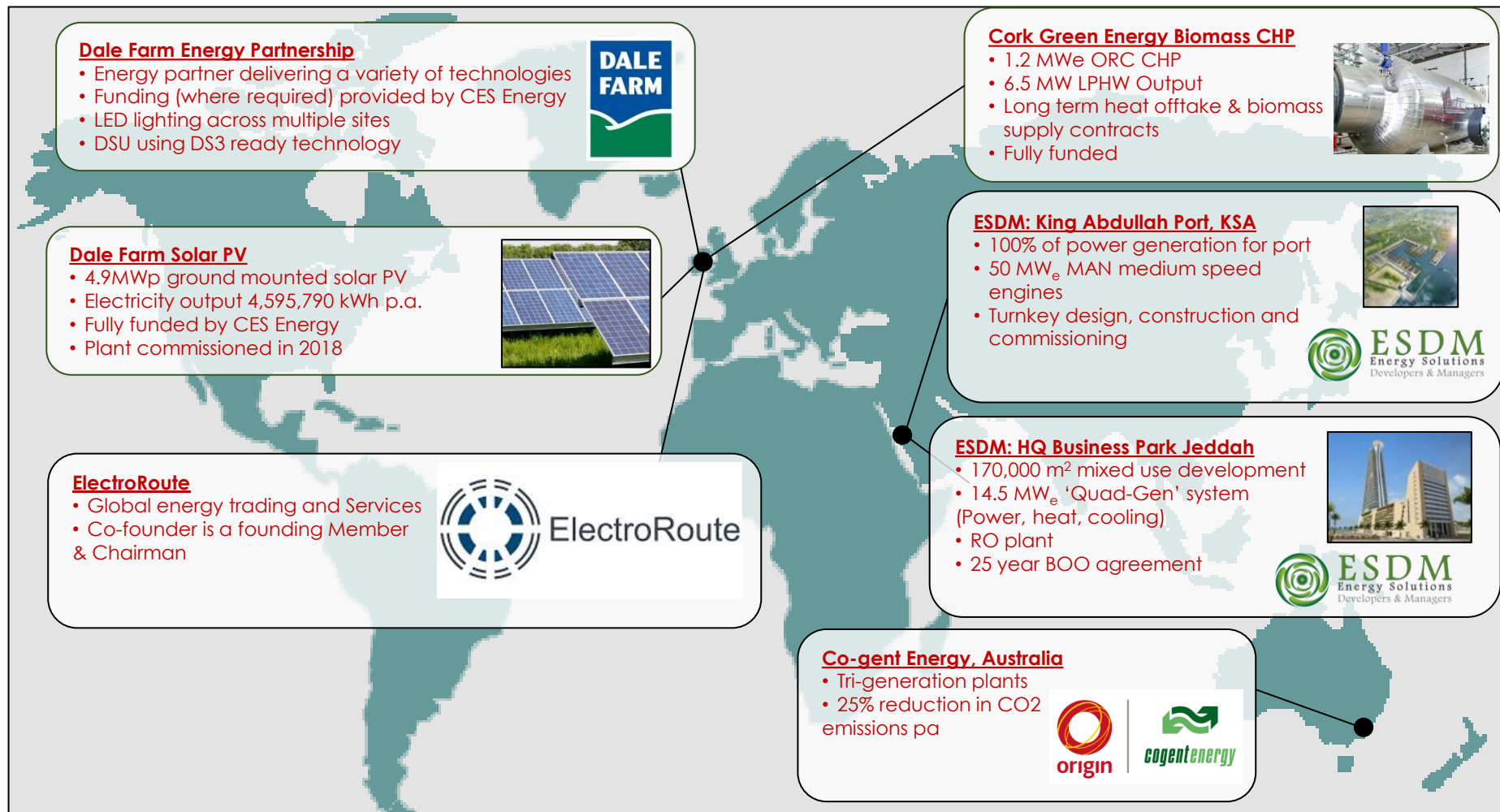


**PAT NOLAN**  
*Co-founder & General Manager*

- 8 years experience in the energy sector with strong project development and project financing focus
- Former Commercial Manager with Centrica Business Solutions Ireland and previously CES Energy
- Developed and delivered a 5MW solar PV project for Dale Farm, Northern Ireland, commissioned in 2018. Responsible for all phases including planning, grid connection, land leases & wayleaves, design, EPC & O&M contract, client PPA, be-spoke grid sharing agreement, export PPA, securing project equity & debt financing
- Delivered financial close on a 8MW thermal & 1.2MW electrical biomass ORC/CHP project in Ireland, commissioned in 2019. Responsible for the preparation of key contracts and management of stakeholders through the due diligence process to secure equity & debt financing.
- Engineering degree from University College, Dublin & Masters in Energy Engineering from University College, Dublin; Entrance Scholar to UCD
- Pat's specialties include: Renewable Energy, Commercial Modelling, Project Financing and Financial Close Delivery & Management

# ASTATINE – WHO WE ARE

We have a proven Irish and international track record in delivering successful energy projects which focus on high efficiency on-site power, heat and cooling solutions, renewable energy solutions and energy efficient services.



# SOLAR PV EXAMPLE – DALE FARM

## Contract Details

- £6m Investment Fully Financed
- 20 Year PPA Agreement
- Agreed rates for electricity
- Solar providing 20% of site elec demand

## Plant Capacities

- Installed Electrical: 5 MW
- Installed Solar Panels: 18,000
- Annual Generation: 4.5 GWh
- Land area covered: 25 acres

## Carbon Offset

- Annual Carbon Offset: >2,000 tonnes PA

## Sample Press Releases *(click link)*

- [Dale Farm Press Release](#)
- [Farmers Journal](#)



L-R: Chief Executive of CES Energy, Tom Marren alongside Chief Executive of Dale Farm Nick Whelan and Dale Farm Group Operations Director Chris McAlinden

# FARM SMART UTILITY

## Overview



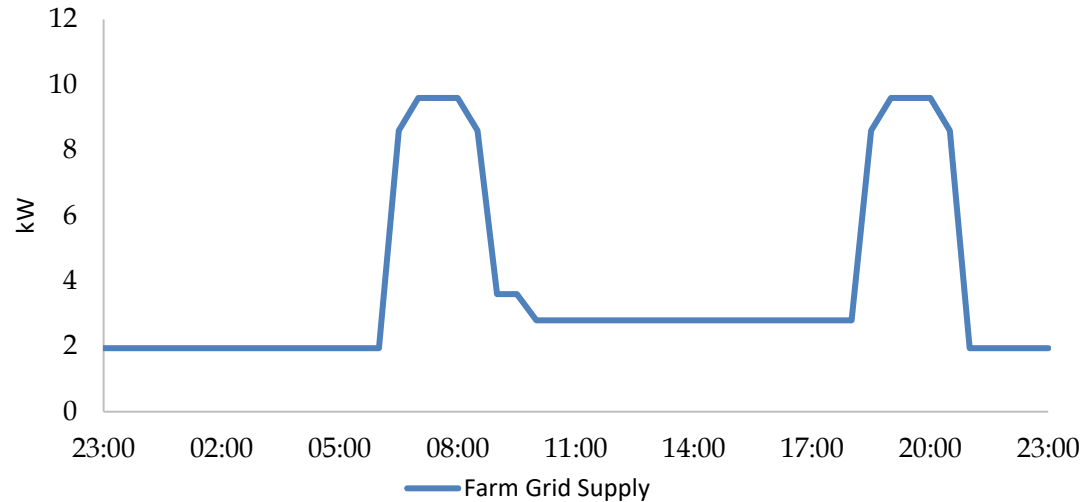
- Farm Smart Utility is a farmer-owned energy company, which will generate significant farm carbon and financial savings from solar power, battery storage and utility payments
- Farmer Owned Energy Utility Company
  - Stage 1 Dairy Farmers
  - Stage 2 Other Farming Sectors
- Farmers organised in the energy sector to maximise participation in the energy transition
- Astatine/Farmer partnership approach will deliver
  - Lowest cost of installation (circa 30%)
  - Maximising revenue from installed system: on-site usage, grid revenues, export PPA's
  - Maximising Grants / Subsidies

# FARM SMART UTILITY

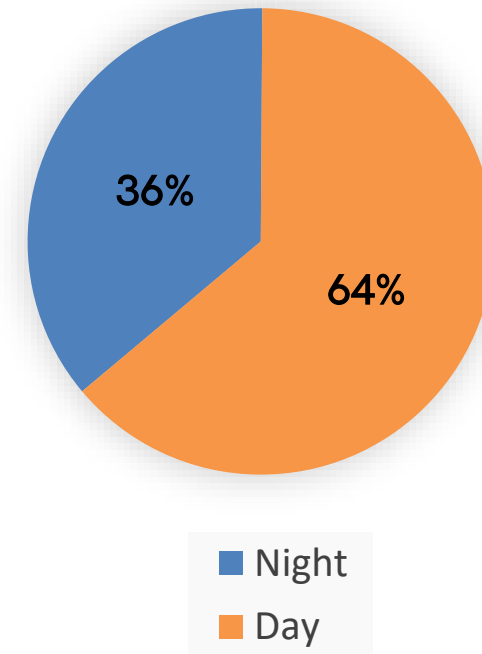
Before:



Sample Dairy Farm Daily Load Profile



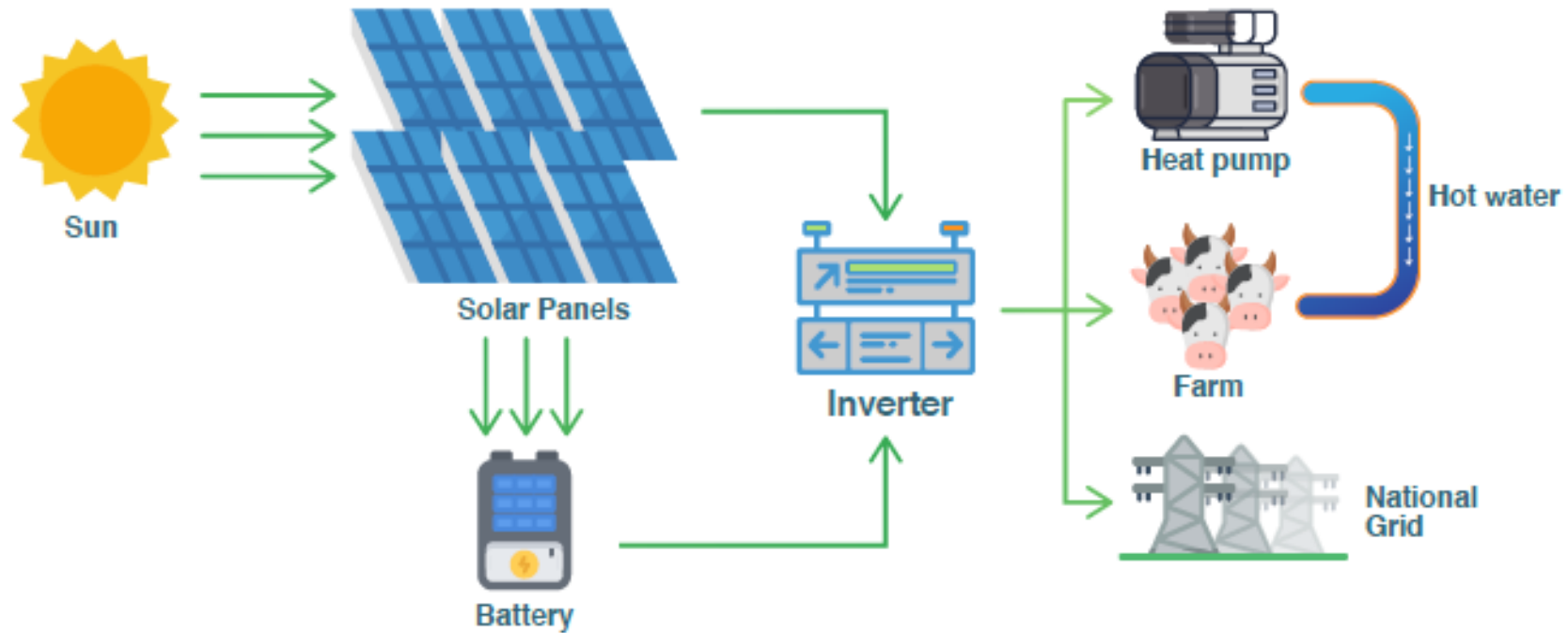
Electricity Consumed at Day and Night Rates



- Average dairy farm consumes electrical power with an approximately consistent daily profile as shown in the above graph
- The profile contains a morning and evening peak coinciding with the farm milking times
- Average dairy farm consumes circa 70kWh/day or 25,000kWh/year
- Average farm consumes the majority of electricity on the higher day-time electricity tariff as shown on the right

# FARM SMART UTILITY

## Our Solution

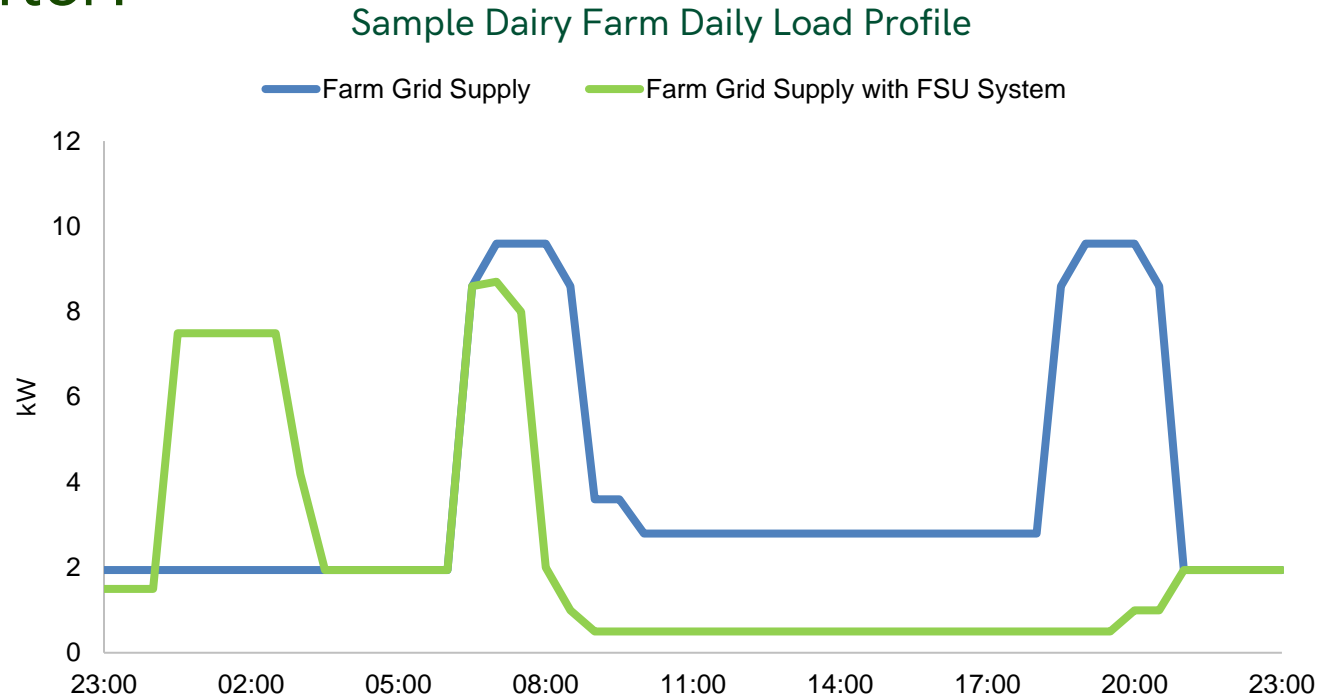


Solar Installed	kWp	20
Battery Installed	kWh	10
Electric Heat Pump Installed		1



# FARM SMART UTILITY

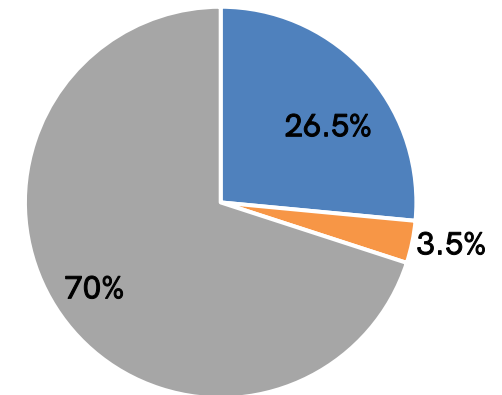
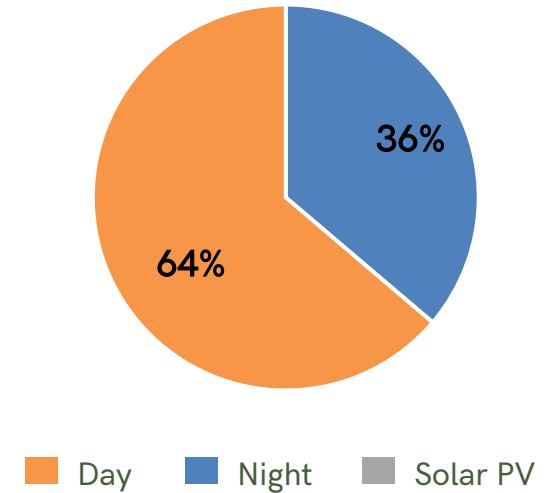
After:



- FSU charges during night tariff to avail of low cost electricity
- Morning peak is initially met by the grid, while night tariffs still apply. Once day tariffs become applicable FSU becomes operational to limit electricity purchased from the grid at the higher tariff.
- FSU continues to limit the amount of electricity imported from the grid throughout the day, significantly reducing electricity bills.



Before



After

# FARM SMART UTILITY



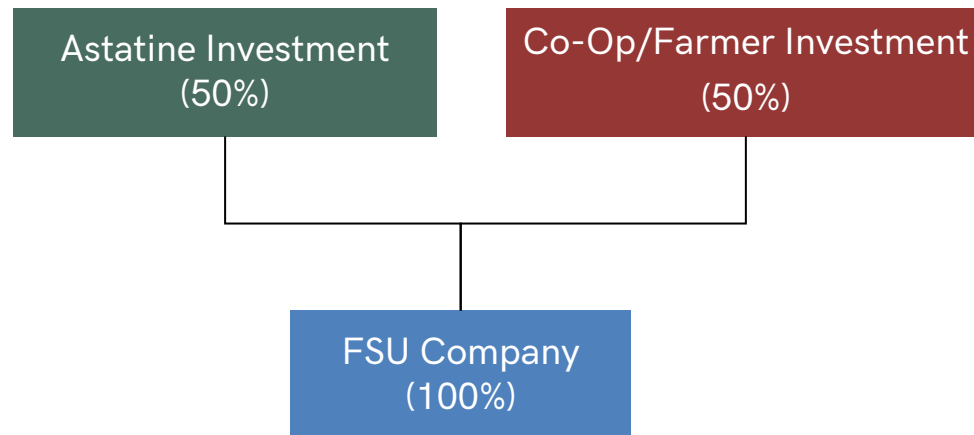
## Key Advantages

- Project Annual Income: €4,000
- Zero capital options available for Farmer
- Farm Utility Carbon Reduction: 70%
- Reduced Grid Electricity Requirements
- Peak / Off-Peak Trading
- Export of Electricity to Grid & access to Grid Revenues
- Reduced/removed requirement for ESB grid connection upgrades (upgrade to 3-phase from single phase, etc)
- Farmer Back-Up/Added Resilience
- Future Structured Profile Tariff / Technologies / Expansion / Energy Markets
- Project management from beginning to end
- Monitored and optimised 24 hours 7 days a week
- Proven track record of Management Team

# FARM SMART UTILITY

## Proposed Commercial Structure

### Shareholding

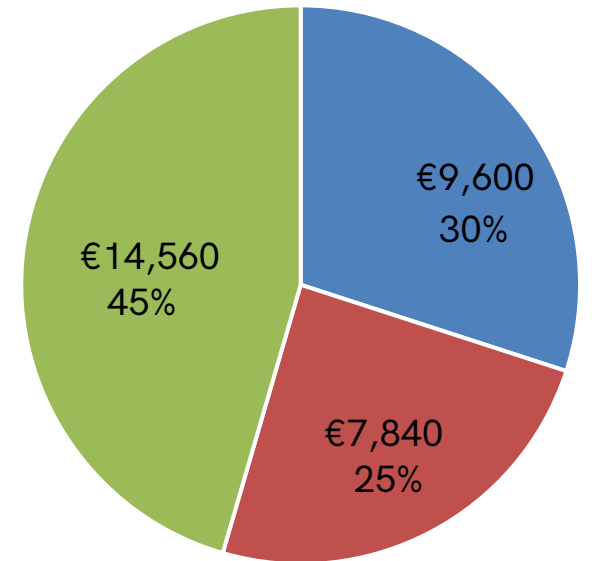


- Astatine and Co-Op and/or Farmers co-invest in FSU Company
- FSU installs and owns assets on member farms
- FSU charge is deducted from milk supply payments
- FSU charge covers O&M costs, debt payments and equity return
- Farmer has net saving = delivered electricity utility savings less FSU charge
- Flexible shareholding subject to Co-Op/Farmer preference



### Funding

Total Capital Cost Per Farm:  
€32k



■ Grant ■ Shareholder Equity ■ Bank Debt

# FARM SMART UTILITY

## Future Opportunities



- Continual investment opportunities
  - Future solar expansion; 1 acre will deliver circa €22K income each year for 25 years
  - Community RESS opportunities (projects up to 5MW income guarantee by government)
  - Bio-energy opportunities

## CONTACT US FOR MORE INFO:

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