SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Ireland's Energy Efficiency Obligation Scheme (EEOS)

IEA Workshop 10 Dec 2019

Rialtas na hÉireann
Government of Ireland

www.seai.ie

Background to EEOS

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Energy Efficiency Directive - (very) brief synopsis

Key sections:

- **Art. 1** - promotion of energy efficiency to ensure 20% headline target on energy efficiency is met
- **Art. 3** - Each Member State shall set an indicative national energy efficiency target, based on either primary or final energy consumption, primary or final energy savings, or energy intensity. (NEEAP)
- **Art. 7** - each Member State shall set up an energy efficiency obligation scheme to ensure that energy distributors achieve a cumulative end-use energy savings target by 31 December 2020.

  The target shall be at least equivalent to achieving new savings each year of 1.5% of the annual energy sales to final customers (from 01 Jan 2014 to 31 Dec 2020)

Related areas (and of interest to SEAI)

- **Art. 4** – renovation of national building stock
- **Art. 5** – requirement on government to upgrade 3% of total floor area it owns each year
- **Art. 6** – requirement on government to purchase high energy-efficient products, services and buildings
- **Art. 8** – requirement to conduct independent, high quality, energy audits on all energy users (non-residential)

Article 7 Target under EED

- Ireland's Article 7 target equates to 1,102GWh PEE per annum
- Ireland adopted an alternative measures approach which includes a supplier obligation.
- A proportion of the target is allocated to regulatory measures and a further amount to other national efficiency programmes (Alternative measures)
- The balance is then allocated as a target to the Obligated Parties
- This target is further split in to energy poor, residential and non-residential sub targets.

Energy Efficiency Obligation Scheme (EEOS)

- Obligations on energy suppliers based on market share
- Meet their targets through energy efficiency measures
- Get ‘credits’ for verified energy savings (kWh)
- ‘Demonstrably material’ and ‘additionality’ evidence required
- Domestic Support usually in the form of discounts or bill rebates

Further info at: https://www.seai.ie/energy-in-business/energy-efficiency-obligation-scheme/

EEOS Overview

Under the Energy Efficiency Obligation Scheme (EEOS):

- Companies with final energy sales >600 GWh per year have mandatory energy saving targets
- The “obligated party” must be material to the savings
- The savings counted towards their targets must be measured and verified
- Obligated parties must establish quality assurance schemes to assure the works and savings

Obligated parties	
Bord Gais Energy	Bord na Mona
Calor Gas	Electric Ireland
Energia	Enprova
Flogas	Lissan Coal Company
PrePayPower	SSE Airtricity
Naturgy (Vayu)	

Period	Annual Target (GWh)	75% Non-residential	20% residential	5% Energy poverty
2014-2016	550	412.5	110	27.5
2017	625	469	125	31
2018-2020	700	525	140	35

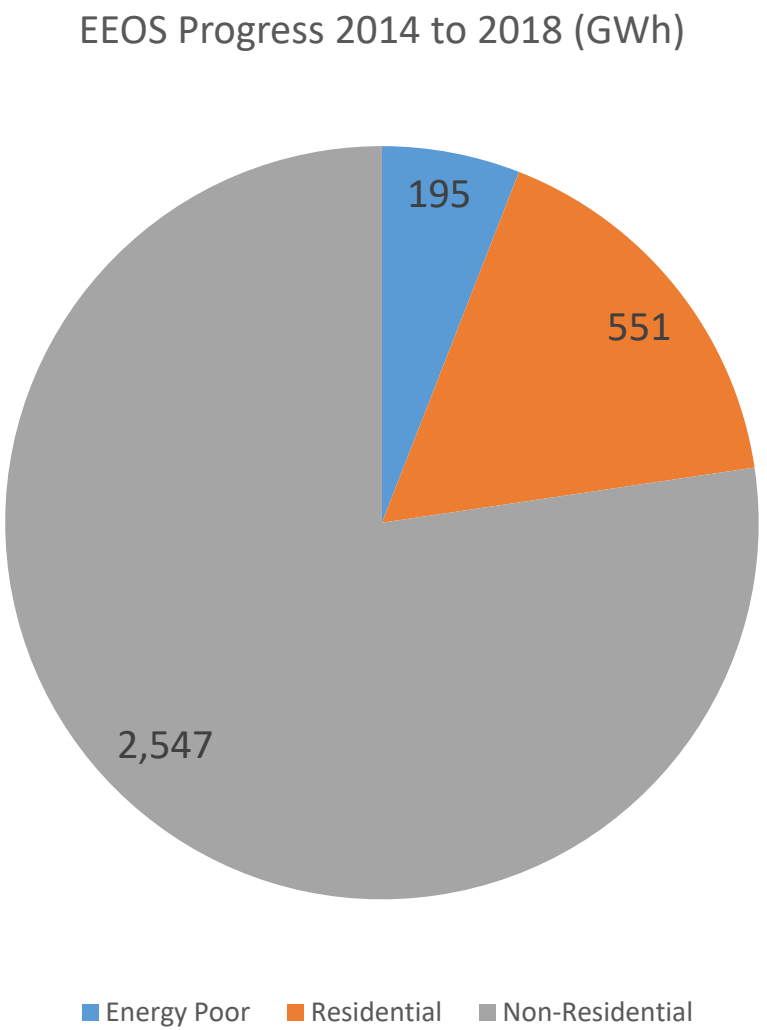
seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Progress to date (2014 to 2018)

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

EEOS Breakdown by sector

EEOS (2014 to 2018)	Achieved (GWh)	kt CO_2
Energy Poor	195.2	45.1
Residential	551.0	127.3
Non-Residential	2,546.7	588.3
Total	**3,292.9**	**760.7**



Types of Support

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Types of supports available from Obligated Parties

Financial support

- Direct monetary contribution towards a project
- Facilitating low interest loans
- Negotiating discounts on materials (e.g. lighting supplies, high efficiency pumps, motors)
- Reduced energy prices or tariffs

Technical support

- Providing a certified energy practitioner to carry out energy audits
- Implementing energy management systems
- Identifying energy efficiency opportunities
- Measuring and verifying savings once opportunities have been realised

Examples only,
not an exhaustive list

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Residential Measures

- Residential: Deemed Credits per measure based on Building Ratings under EPBD
- Savings for SEAI retrofit programmes are open to Supplier involvement

Existing Deemed Credits

Measure	Minimum Specification - All measures installed must meet the minimum specification listed below	Apartment	House
High Efficiency Gas or Oil fired Boiler with Fully integrated Heating Controls Upgrade	90%+ Boiler gross seasonal efficiency as per HARP database, full zone control on space and water heating, with at least 2 zones for space heating as recommended in TGD L 2008 and 80mm hot water cylinder insulating jacket	4,900	7,700
High Efficiency Gas or Oil fired Boiler with Fully integrated Heating Controls Upgrade with remote access	90%+ Boiler gross seasonal efficiency as per HARP database, full zone control on space and water heating, with at least 2 zones for space heating as recommended in TGD L 2008 and 80mm hot water cylinder insulating jacket. Programmer to have capacity to adjust heating schedule remotely via Web or SMS	5,130	8,070
Fully integrated Heating Controls Upgrade	Full zone control on space and water heating, with at least 2 zones for space heating as recommended in TGD L 2008	2,350	3,700
Fully integrated Heating Controls Upgrade with remote access	Full zone control on space and water heating, with at least 2 zones for space heating as recommended in TGD L 2008. Programmer to have capacity to adjust heating schedule remotely via Web or SMS	2,580	4,070
High Efficiency Gas or Oil fired Boiler with Entry Level Heating Controls Upgrade	90%+ Boiler gross seasonal efficiency as per HARP database, 24hr/7day programmer and room thermostat	3,050	4,790
High Efficiency Gas or Oil fired Boiler with remote access Entry Level Heating Controls Upgrade	90%+ Boiler gross seasonal efficiency as per HARP database, 24hr/7day programmer and room thermostat Programmer to have capacity to adjust heating schedule remotely via Web or SMS	3,150	4,950

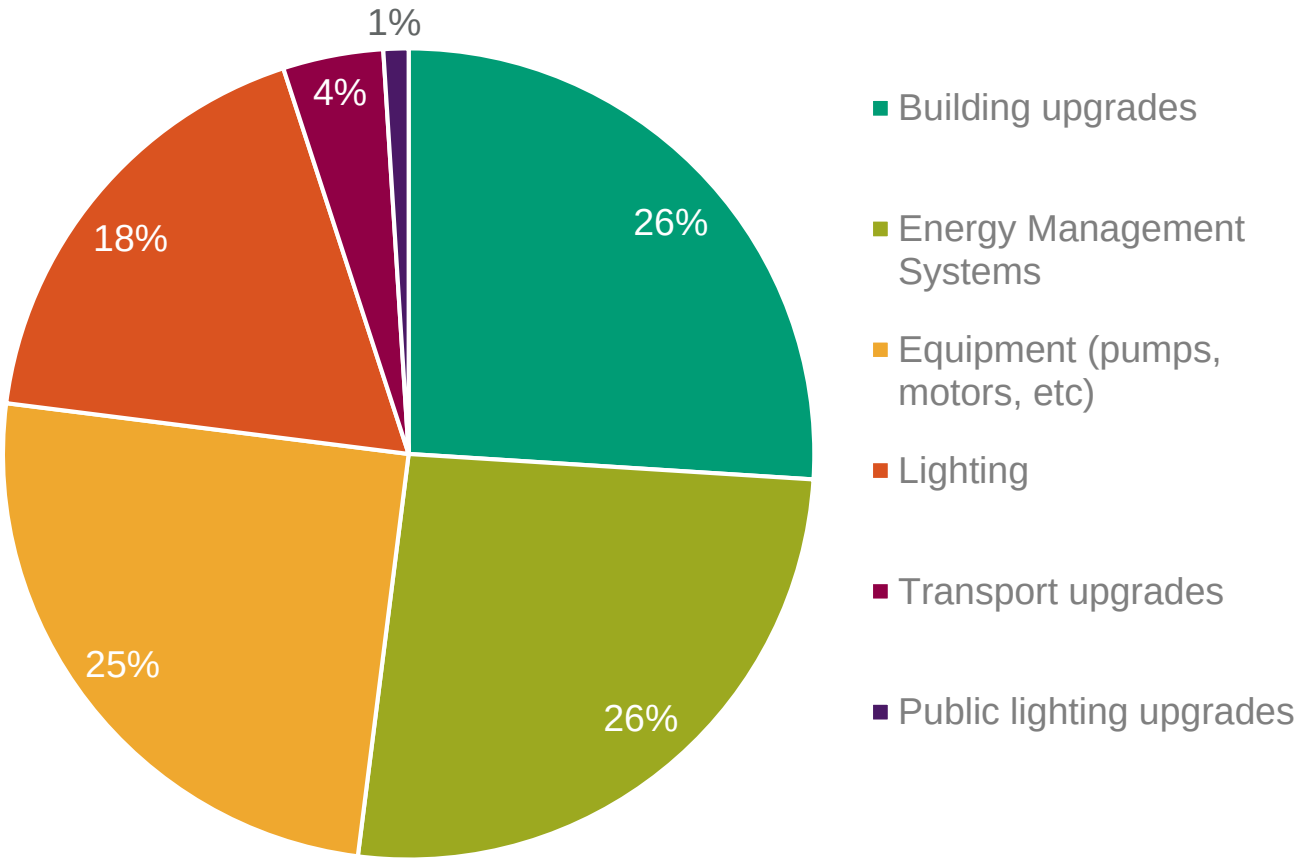
http://www.seai.ie/EEOS/Energy-Saving-Credits-Table.pdf

Typical non-residential measures

Lighting Decommissioning, maintenance, retrofit and controls	**Ventilation and air conditioning** Free cooling, maintenance, optimisation of operation and general energy management	**Transport** Eco-driving, fleet and energy management.
Heating Servicing, set point regulation, control and fabric upgrade.	**Motors, drives and pumps** Replacement, VSDs and control	**Combined heat and power** To meet 'own use' heat and electricity demand
Refrigeration Temperature control, pipe insulation, relocation and replacement	**Compressed air** Leak repair, optimisation, redesign and replacement	**Industry processes** Steam trap inspections, facility programmes and BMS

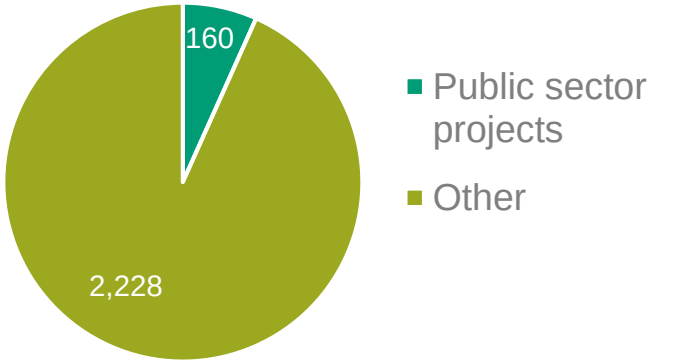
Public sector engagement

Breakdown of public sector projects, by GWh



Example areas
Hospitals
Education facilities
County council facilities *e.g. leisure centres, car parks*
Major infrastructure *e.g. rail, bus, water, airports*

EEOS non-residential projects (GWh)



EEOS Future.

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Next 10 years to 2030

- New EED adopted Dec 2018
- New Article 7 – bigger targets, more inclusive (e.g. transport must be included)
- Emphasis on ensuring linkup with All of Government Climate Action Plan
- SEAI and EEOS team are supporting DCCAE in implementation of Art 7

Consultation on implementation of Art 7.

- Consultations on changes and options for implementation to be published through out 2019
- Focus will be on:
  - design of scheme (e.g. should there be an obligation scheme?),
  - Which sectors should be targeted?
  - Who should be obligated and what are the thresholds?
- Next consultation December 2019

  https://www.dccae.gov.ie/en-ie/energy/consultations/Pages/default.aspx

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Lessons Learned

- What's Difficult:
- Access to sales data to assess for obligation – need agency teeth
- Policy measures difficult to measure and verify….works are easier
- Conscious decision know how to measure an initiative before allocating as alternative….need a plan
- Threshold – for the obligation…figure that out to meet the target in an integrated and sensible way, avoid really small providers

What works well:

- Quality System requirement for providers
- Energy Credits Management System
- Governance Group
- Deemed Credits for residential and Technical Calculators for certain technologies
- Some Energy Suppliers starting to innovate to help deliver one stop shop models

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

All of Government Climate Action Plan 2019

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

All of Gov Climate Action Plan - Targets for Residential

- Reduce CO2 eq. emissions from the sector by 40–45% (relative to 2030 pre-NDP projections)
- 500,000 homes to be upgraded to B2 BER by 2030
- Install 600,000 heat pumps (400,000 existing buildings)

CLIMATE ACTION PLAN

Action 47: Establish a One-Stop-Shop model for energy efficiency upgrades

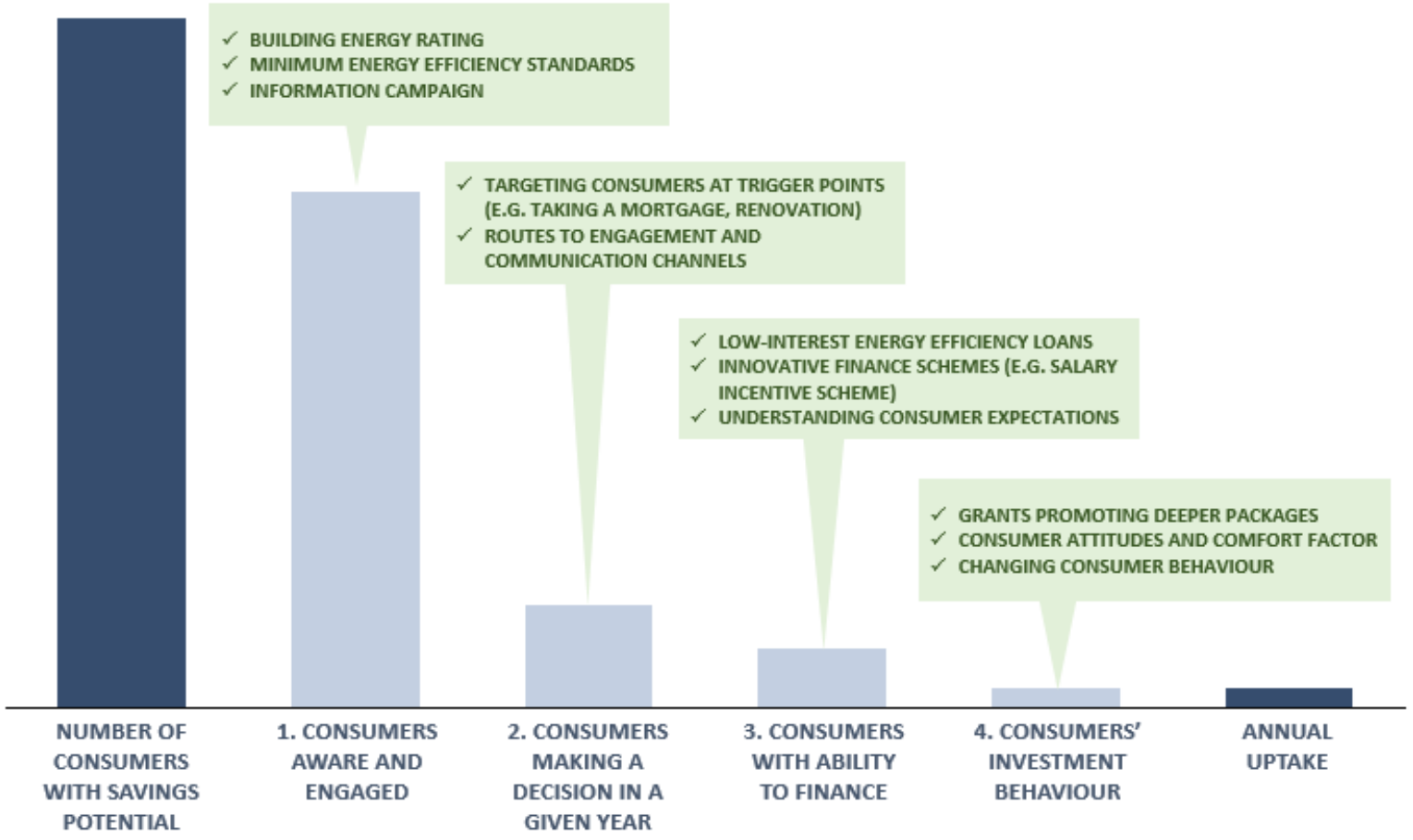
Action 48: Develop a plan to establish a new delivery body to ensure the effectiveness and efficiency of the delivery system for retrofits, including examining how to deliver a major house retrofitting programme in the Midlands. We will also look at easy pay-back models, for example through your electricity bill

Action 49: Develop a plan to ensure that the grant schemes, new finance models and the delivery system are effectively integrated

Action 53: Identify additional options for targeted financing for energy efficiency retrofits in the domestic and commercial sectors

Action 54: Provide easier to access tailored finance for SME and residential energy efficiency investment utilising the EIB Smart Finance for Smart Buildings loan scheme

Consumer Decision-Making Framework



5. IMPROVING ATTRACTIVENESS OF SUBSIDY AND SUPPORT PROGRAMMES

- ✓ ONE-STOP SHOP
- ✓ TRUSTED ADVISORS THROUGHOUT
- ✓ LEARNINGS FROM SEAI PROGRAMMES
- ✓ SEAI BEHAVIOURAL ECONOMICS TEAM
- ✓ NEW SEAI PILOTS AND TRIALS
- ✓ PROMOTING DEEPER RETROFITS VIA POLICY DESIGN

Research

- Consumer surveys
- Focus groups
- Design thinking exercises
- Pilots and trials
- Funded research studies
- Data analysis &Modelling
- SEAI programme delivery experience

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

OSS Delivery Model



Engagement
1. Capturing consumer attention
2. Promoting the retrofit concept
3. Building focused routes to engagement

Assessment and Quotation
1. Providing tailored consumer advice
2. Undertaking home site visit
3. Providing quotes for proposed work

Sourcing Finance
1. Integrated Finance in the one stop shop offering
2. Providing various sources of low cost finance- banks, credit unions, employers, consumer finance, credit intermediaries or other lenders
3. Easy access and routes to finance across a number of platforms

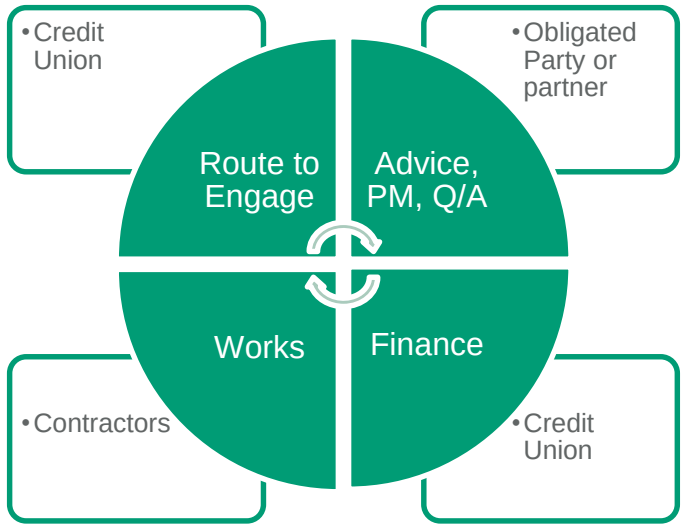
Installation
1. Schedule contractors for works implementation
2. Quality Assure works
3. Project Management, Governance and Grant Administration

Completion and Repayment
1. Project completion documentation
2. Invoicing and Payment
3. Loan repayment scheduling
4. Grant Drawdown

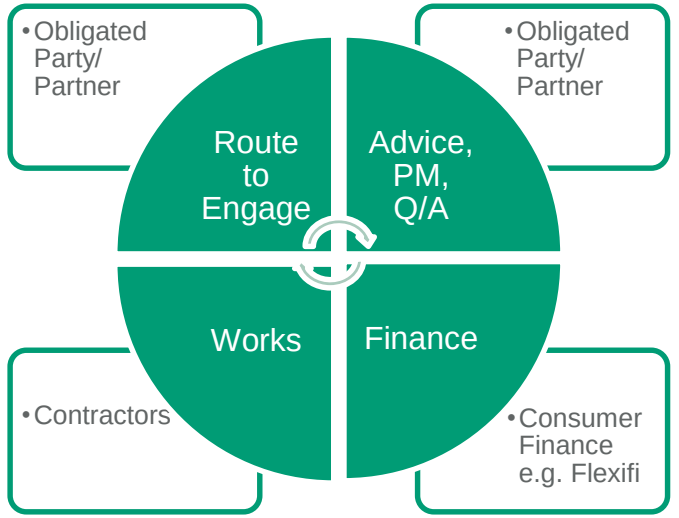
Some Examples of Models for Routes to Engagement

One Stop Shop

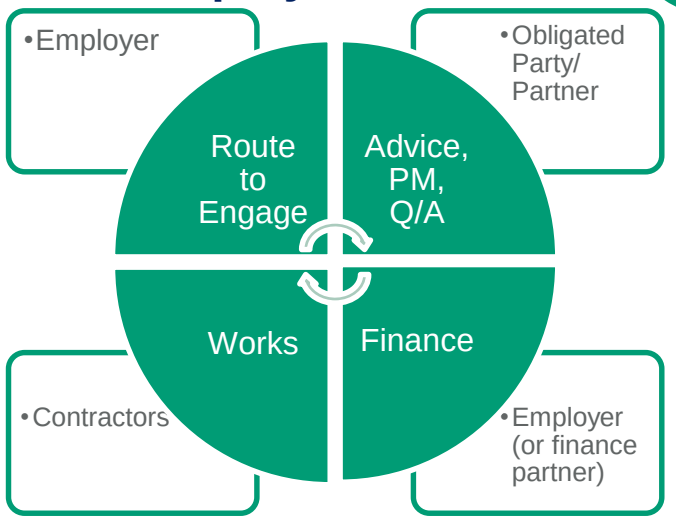
Credit Union Model



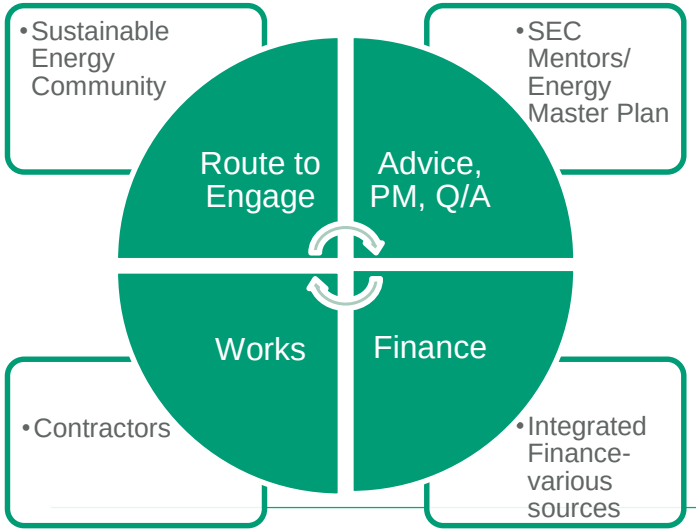
Consumer Finance Model



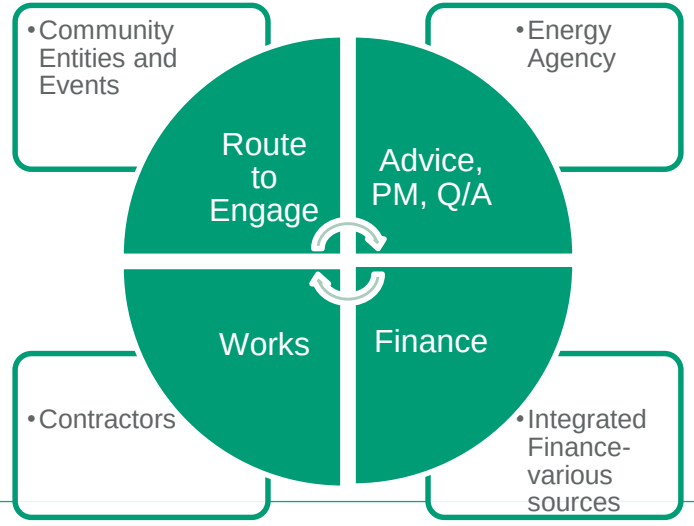
Employer Model



SEC Model



Local Energy Agency Model



These are just some examples of delivery models, more will develop and be encouraged through pilots and trials.

In all cases it is envisaged that Energy Suppliers will have some role in projects, for instance this could be a financial contribution or a full PM role.

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Low Cost Financing and Grants: The Effect

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Current Situation (2018)

Lighter retrofit



Average Cost
€4,000

Saving 189 GWh p/a

Target for the Future

Moving towards
deeper retrofits



Average Cost
€15-25,000

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Thank you

Joe Durkan
joe.durkan@seai.ie
+353 1 808 2148

@ seai_ie

Ireland's European Structural and Investment Funds Programmes 2014-2020
Co-funded by the Irish Government and the European Union

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND