Llywodraeth Cymru
Welsh Government

Ynni Cymru

Strategic Portfolio Business Case

September 2024

Contents

1.0 INTRODUCTION

1.1 Purpose of the Strategic Portfolio Business Case

This document sets out the business case for the establishment of Ynni Cymru, following Welsh Government guidance on 'Better Business Cases'. Because Ynni Cymru will deliver a varied programme of activity across Wales, a strategic portfolio business case has been adopted.

1.2 The document

This document sets out the business case for establishing Ynni Cymru. It is structured as follows.

Section 2 is the strategic case. It demonstrates the policy alignment for the establishment of Ynni Cymru, the case for change, Ynni Cymru's scope and where it will be located with respect to other Welsh Government renewable energy activities.

Section 3 is the economic case. It considers value for money and explores the preferred way forward from a range of options for delivering the agreed scope, including economic analysis of a shortlist of options, to arrive at the preferred option.

Section 4 is the commercial case. It considers the commercial arrangements that will be necessary with potential suppliers to deliver the preferred option.

Section 5 is the financial case. It assesses the funding requirement to deliver the preferred option and to what extent this is affordable within available resources.

Section 6 is the management case. It explores how the organisations involved should plan for successful delivery.

2.0 THE STRATEGIC CASE

2.1 Introduction

The policy context for energy in Wales is set out in a number of Welsh Government national and local planning policy and guidance documents. Allied to these are targets for delivering more renewable energy generation capacity and its local ownership.

2.2 Welsh Government policy context

2.2.1 Declaration of climate emergency

In 2019 the Senedd declared a climate emergency. It was the first national Parliament in the world to do so.

2.2.2 Local and shared ownership

In February 2020 Welsh Government set out its expectation for all new renewable energy projects in Wales to include at least an element of local ownership, to retain wealth and provide real benefit to communities. Locally owned generation provides a strong opportunity to retain economic value, contributing to prosperity.

Local and Shared Ownership of Energy Projects provides guidance on the options available for meeting the local ownership policy objective and the core benefits associated with an element of local ownership. 'Locally owned' projects are defined as energy installations, located in Wales, which are owned by one or more individuals or organisations wholly owned and based in Wales, or organisations whose principal headquarters are located in Wales.

2.2.3 Net Zero Wales

Welsh Government published Net Zero Wales, in October 2021, setting out the scale of change required to meet the statutory emission reduction targets for Carbon budget 2 2021-25, which will require electrification of industry, transport and domestic heat. Net Zero Wales sets out a range of plans and policies to deliver this transition in a way that delivers net benefit to Wales. This includes the commitments for:

- Wales to generate electricity equal to 70% of its consumption from renewable sources by 2030
- 1GW of renewable energy capacity in Wales to be locally owned by 2030
- All new renewable energy projects to have at least an element of local ownership from 2020
- building on the existing pipeline of public and community renewable projects, evaluating the potential for renewables on public land

It also included the following discussion on the impact of net zero on the Welsh economy.

> *'We believe that displacing fossil fuels with low carbon sources will help Wales create the industries and jobs of the future. New skills and capabilities will be required across industry and government to the meet the challenge of decarbonising the energy system. Many of these new jobs are expected to be highly skilled and well paid and will provide opportunities to redeploy employees from traditional industrial sector. There will also be an expansion of lower skilled employment in the renovation and construction sector.'*

Augmenting this, the 2021 Programme for Government included the commitment to:

"expand renewable energy generation by public bodies and community groups in Wales by over 100MW by 2026".

2.2.4 Renewable energy 'deep dive' and updated targets

After an exercise in 2021 to identify opportunities and develop a list of recommendations to significantly scale up renewable energy in Wales, Welsh Government set the following vision:

> *"Our Vision is for Wales to generate renewable energy to at least fully meet our energy needs and use surplus generation to tackle the nature and climate emergencies. We will accelerate actions to reduce energy demand and maximise local ownership retaining economic and social benefits in Wales."*

In 2023, the Welsh Government consulted on the amendments to the above targets. This resulted in the following revised commitments:

- to meet the equivalent of 100% of our annual electricity consumption from renewable energy by 2035 and to continue to keep pace with consumption thereafter
- a target for at least 1.5GW of renewable energy capacity to be locally owned by 2035, excluding heat pumps.

2.2.5 The National Plan and National Planning Policy

Planning Policy Wales (PPW) sets out the land use planning policies for Welsh Government, provides advice on a wide range of issues and is supported by a number of Technical Advice Notes.

> *'Overall power demand is expected to increase as a result of growing electrification of transport and heat. In order to ensure future demand can be met, significant investment will be needed in energy generation, transmission and distribution infrastructure. The system will need to integrate renewable generation with storage and other flexibility services, in order to minimise the need for new generation and grid system reinforcement. Collectively we will need to concentrate on reducing emissions from fossil fuel sources, whilst driving further renewable generation which delivers value to Wales.'*

Future Wales**,** the national development framework, positions the planning system to deliver a prosperous and fairer Wales where sustainable living and the efficient use of resources are the norm, setting the direction for development in Wales to 2040. It seeks to:

> *'facilitate the decarbonisation of the economy, including energy and transport choices, and promote the principles of a circular economy'.*

2.2.6 Supporting Acts and Guidance

Environment (Wales) Act (2016)

The Environment Act commits Wales to a long-term target of reducing emissions by at least 80% by 2050 as well as interim targets and 5-yearly carbon budgets.

In 2019, the UK Committee on Climate Change recommended that Wales increase their carbon reduction target to 95% by 2050. Welsh Government accepted this recommendation but, having considered new evidence, declared an ambition to increase the target to net zero by 2050. In February 2021, Welsh Government set out its legal commitment to achieve net zero emissions by 2050 but with an ambition to *"get there sooner*".

Well-being of Future Generations (Wales) Act (2015)

The Well-being of Future Generations Act gives the ambition, permission and legal obligation to improve Wales' social, cultural, environmental and economic well-being. It requires public bodies in Wales to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change. It puts in place seven well-being goals and makes it clear that public bodies must work to achieve all of the goals.

Decarbonisation of the Public Sector (2017)

Welsh Government's ambition for the public sector to be carbon neutral by 2030 is set out in a policy statement. This can only be achieved via an ambitious programme of energy efficiency and renewable energy generation projects across the Welsh public estate.

Regional Energy Strategies

The four Regional Energy Strategies published in 2021/2 set out ambitious visions and action plans to support delivery of net zero by 2050.

Local Area Energy Plans

The Welsh Government has committed to a major programme of local area energy planning (LAEP) roll-out, so that every local authority area in Wales has its own unique plan. The renewable energy deep dive, reporting in 2021, set out the following recommendations:

> *'We will scale up local energy plans to create a national energy plan by 2024, mapping out future energy demand and supply for all parts of Wales to identify gaps to enable us to plan for a system that is flexible and smart - matching local renewable energy generation with energy demand.'*

Future Energy Grid Project

The Insights Report of the Future Energy Grid for Wales project made the following recommendations that Welsh Government should:

- Accelerate enabling conditions for the Net Zero transition. Welsh Government should prioritise skills development, citizen engagement, and access to data. Fostering regional supply chains and collaborating with training providers is essential. As electricity consumption increases, particularly in heat and transport sectors, creating a supportive environment is crucial. Although direct control may be limited, the government can play a vital role in facilitating the necessary changes
- Collaborate with Local Authorities to accelerate the adoption of Demand Side Response (DSR) and other demand side options, such as thermal storage, smart heating, EV charging, and building retrofits. Smarter energy systems with increased potential for DSR could open up market opportunities for people in Wales and help to support networks to reduce the impact of peak energy
- Work with developers and providers to support flexibility and storage projects, which should include continuing to ensure a positive planning environment for projects on the distribution network, where planning is a devolved matter, and working with Local Authorities to support storage and flexibility in domestic properties

Heat Strategy for Wales

The Welsh Government's Heat Strategy for Wales aims to develop a decarbonised heat system that aligns with net zero ambitions. As heating accounts for 50% of energy use in Wales, with 75% of it generated using fossil fuels, addressing this area is crucial. The key objectives of the strategy are:

Enabling Framework: Supporting a just transition to a low-carbon heat system

- Low carbon heat is understood and supported by heat users in all sectors – collaboration and knowledge-sharing have driven demand-side momentum towards net zero heat
- Our highly-skilled workforce supports local suppliers and manufacturers serving the transition in Wales – new talent, investment, and innovative solutions are drawn into Wales
- The costs of the transition are fairly distributed across society

Energy Networks: Shaping the future of heat supply

- Heat networks are a reliable and efficient provider of low carbon heat in suitable areas across Wales

Homes:

- A clear regulatory framework will be in place that supports net zero homes across all rented, owner-occupied, and social housing
- Low carbon heat solutions will be affordable to install and affordable to operate

Businesses

- Businesses will have the confidence to invest in the transition to low carbon heat and net zero buildings

Industry

- Industry is transitioned, competitive, and sustainable for the long-term following implementation of best available techniques for energy efficiency and low carbon heat

2.3 The case for change

2.3.1 Investment objectives

The following preliminary investment objectives for Ynni Cymru have been established:

- To expand locally owned renewable energy used and generated in Wales
- To optimise the efficiency and effectiveness of locally owned renewable energy use and generation projects
- To accelerate the transition and deployment of smart local energy systems across Wales
- To facilitate a just transition to net zero, retaining the benefits for Welsh communities

These objectives will be made ‘smart’ (specific, measurable, achievable, realistic and time bound) throughout the further development of the business case.

2.3.2 Existing arrangements

The Welsh Government currently supports the delivery of energy priorities though various services and arrangements. For example, the Welsh Government Energy Service (WGES), Community Energy Wales and the Renewable Energy Developer (Trydan Gwyrdd Cymru Ltd). They support delivery in the following ways:

- WGES provides support to public and community bodies in Wales for regional energy planning, energy efficiency, renewable energy generation projects and vehicle fleet decarbonisation
- Community Energy Wales is a not for profit membership organisation funded in part by the Welsh Government to provide support to the community energy sector and community groups developing energy projects in Wales.
- Trydan Gwyrdd Cymru Ltd was incorporated in October 2023 as a standalone company wholly owned by Welsh Government to accelerate the development of utility scale renewable energy projects on the Welsh public estate.

In order to establish a role for Ynni Cymru within this portfolio of existing energy delivery activity, an early priority has been to explore areas where there are gaps in provision. After extensive research, and given the important activity already being carried out by the organisations above, Ynni Cymru's core focus will be to accelerate both the development and the delivery of smart local energy systems across Wales.

Ynni Cymru's activities will contribute to accelerating the just transition to renewable energy, and so to meeting Welsh Government's ambitions in the following ways:

- By increasing the productivity and profitability of existing locally owned renewable energy projects. Returns made by locally owned projects are typically invested back into the communities in which they are located, so bringing additional local benefits
- By maintaining a focus on locally owned projects, Ynni Cymru will support the development of skills and jobs in the renewable energy sector in Wales
- By growing the number of, and smartening, locally owned renewable energy projects Ynni Cymru will maximise the local benefits from such projects, whilst future proofing for the energy transition
- By focusing on smart local energy systems, Ynni Cymru will facilitate sharing of benefits between local generators and customers, ensuring more energy is consumed locally. Ynni Cymru will always have regard to the 'just' element of the just transition and so, where there are choices to be made, will work to maximise benefits to those most in need

This growth in locally owned renewable energy will contribute towards achievement of ambitions in both regional energy strategies and local area energy plans.

What are smart local energy systems?

A SLES joins up different energy generation, storage, demand, and infrastructure assets in a local area, making them operate more intelligently and deliver local benefits.

- **Smart** - projects utilise data and controls to ensure that energy is used more efficiently and effectively, at the right place and at the right time (e.g. control systems and software for monitoring, automation, artificial intelligence, and/or trading energy).

- **Local** - projects will be locally owned, they will recognise that different places and communities in Wales have different needs, and benefits will accrue locally (e.g. local ownership, carbon, financial and wider environmental and social benefits).

- **Energy System** - projects use multiple types of technology (e.g. a combination of local renewable energy generation to facilitate renewable power use, low carbon heating, cooling and hot water, ultra-low emission transportation, demand reduction, co-located renewable energy generation technologies, optimised use of grid capacity, and energy storage).

SLES projects are currently being explored by a range of organisations across Wales. Various energy projects by community enterprises, public sector organisations, private sector businesses and universities may all constitute SLES projects. Funding from programmes such as the Prospering from the Energy Revolution (PFER) have supported preparation of a range of feasibility studies, detailed designs and demonstrator projects across the UK. Learning from PFER will be used to refine the activity of Ynni Cymru and to identify those projects which can best deliver the outcomes sought.

Ynni Cymru will provide coordination and specialist support, working alongside existing programmes, to accelerate both the development and the delivery of smart local energy systems across Wales.

The scope of Ynni Cymru will centre around the following activities:

- Optimising existing locally owned renewable energy use and generation projects
- Growing locally owned renewable energy use and generation projects
- Increasing local ownership in renewable energy projects
- Aggregating locally owned renewable energy projects to enable access to wider energy markets
- Developing local energy markets to enable mutual benefit for consumers and suppliers
- Supporting smart local energy systems, where renewable energy supply is expanded to meet increased demand and supply is better balanced with demand

In doing this Ynni Cymru will have three inter-connected programmes of activity: Strengthen, Grow and Smarten. This will start by offering health checks to locally owned renewable energy projects, where physical asset performance and commercial deals such as the price received for energy sold will be benchmarked and help offered to secure better deals and/or improve maintenance and management of assets. At the same time, opportunities will be identified for growing and 'smartening' operations at these projects. This can be by adding additional generation; making better links between energy generated and local customers, so that both generators and consumers can benefit; making use of storage, so that energy generated that is currently wasted because of limited grid capacity can be saved and sold later; and/or combining assets into a 'virtual power plant' that can then access national and regional electricity flexibility markets where energy is bought at a higher premium at times when demand is high.

In later activities Ynni Cymru will explore and develop local energy markets, where supply and demand can be balanced and benefits delivered to consumers through reduced energy costs and some of the increased demand for electricity produced as a result of adoption of electric vehicles and heat pumps can be satisfied by this balancing activity, thereby reducing the pressure on the grid.

Ynni Cymru's work will be in collaboration with partners in the public, community and private sectors and with other Welsh Government programmes.

2.4 Business needs

The breadth of locally owned renewable energy projects which could be replicated and/or developed in Wales is extensive, given the range of local community renewable energy projects supported by the Welsh Government's vision for local ownership. A specialist organisation is required to impartially advise on the wealth of existing information around them and to effectively support communities to develop, deliver and, crucially, smarten existing and future projects. The significant complexity requires organisations to access specialist resources and potentially access additional funding to support project delivery. Ynni Cymru

will provide the means to pool demand across the sector for these specialist resources, and so provide a more comprehensive and cost-effective solution than these organisations sourcing this resource themselves.

2.5 Main benefits

The wider benefits attributable to Ynni Cymru are listed below and will be delivered within the framework of the Well-being of Future Generations Act well-being goals shown below:

- A Prosperous Wales
- A Resilient Wales
- A Healthier Wales
- A More Equal Wales
- A Wales of Cohesive Communities
- A Wales of Vibrant Culture and Thriving Welsh Language
- A Globally Responsible Wales

Specific benefits sought are:

- CO2 saved – Globally Responsible Wales, Resilient Wales
- Money saved by consumers, reduction in fuel poverty – More Equal Wales, Wales of Cohesive Communities
- Extra revenue for locally owned generators – Prosperous Wales
- More viable projects – Prosperous Wales, Resilient Wales
- Increased GVA – Prosperous Wales,
- Socio-economic benefits from jobs – Prosperous Wales
- Grid benefits – less infrastructure needed to meet net zero – Resilient Wales
- Wider society health and welfare benefits, e.g. air quality and warm homes – Healthy Wales
- Community involvement - Wales of Cohesive Communities

2.6 Main risks

A risk register has been prepared and is regularly reviewed. The highest scoring risks and their mitigation strategies are set out below.

	Risk event	Risk impact	Proximity	Score	Risk management
1	Lack of stakeholder support support for Ynni Cymru	Change in stakeholder priorities leads to halt in programme, no long term funding and inability to deliver full benefits.	≤ 3 months	15	Sign off of business case. Ensure new Ministers are briefed on programme. Work with WG and external stakeholders to develop and promote programme.
3	Ynni Cymru unable to recruit sufficient capacity	Programme cannot deliver full range of services	7-12 months	12	Advertise roles widely and ensure salaries reflect market. Use Ynni Cymru training budget to continue to develop the team.
4	Ynni Cymru unable to retain sufficient capacity	Programme cannot deliver full range of services	1 - 2 years	12	Maintain a positive working culture. Keep staff engaged, communicate well, clarity of objectives.
5	Loss of credibility due to project failure	Ynni Cymru loses credibility and trust due to poor or failed delivery of a project/projects	1 - 2 years	12	Good engagement with project stakeholders, clear understanding of shared objectives, clear roles and responsibilities outlined and skills procured. Operate 'fail fast' model and adopt learning.
6	Ynni Cymru fails to develop replicable products	Ynni Cymru cannot realise the reduced cost or transferability of business models or approaches, limiting ability to scale.	2 years +	12	Focus on key problems and market failures and design solutions to be replicable from the beginning.
7	Assumed benefits not realised	If project benefits are not realised, risk that overall programme fails to deliver benefits laid out in business case.	2 years +	12	Business case approval process for projects to include benefits assessment. Each programme/project to be responsible for benefits management through a benefit realisation plan. Monthly highlight to relevant programme board / governance.
8	Decision making processes lead to delay	Key projects and programmes delayed in starting and benefits delayed. Damage to reputation of Ynni Cymru and WG.	7 - 12 months	12	Advertise roles widely and ensure salaries reflect market.

2.7 Constraints

Constraints are external conditions and agreed parameters within which Ynni Cymru must be delivered, where Welsh Government has little or no control. These include:

- Rules and regulations relating to energy generation and supply
- Availability of Welsh Government resources
- Availability of resources in the locally owned renewable energy sector

2.8 Dependencies

Dependencies are factors outside the control of Ynni Cymru, but which will affect its success. These include:

- Decisions from UK Government on supporting renewable energy and the transition to net zero

2.9 Conclusion

The strategic case and associated case for change for Ynni Cymru is evidenced above. There is strong alignment with the ambitions of Welsh Government with respect to both renewable energy generation, local and shared ownership and development of smart local energy systems. The proposed objectives for Ynni Cymru are:

- To expand locally owned renewable energy used and generated in Wales
- To optimise the efficiency and effectiveness of locally owned renewable energy use and generation projects
- To accelerate the transition and deployment of smart local energy systems across Wales
- To facilitate a just transition to net zero, retaining the benefits for Welsh communities

3.0 THE ECONOMIC CASE

3.1 Introduction

This section describes how options for the scope, delivery, implementation and funding of Ynni Cymru have been developed and assessed and gives the results of this evaluation. This appraisal follows the Welsh Government Better Business Cases methodology and was informed by a Making the case for Change and Option Appraisal workshop, including the Senior Responsible Officer (SRO) and other members of Welsh Government.

3.2 Critical Success Factors for Ynni Cymru

The methodology requires initial identification of critical success factors and indicates that the following are relevant to most portfolios.

- *Strategic fit and business needs* - how well the option meets strategic objectives, business needs and service requirements, and provides holistic fit and synergy with other strategies, programmes and projects
- *Potential value for money* - how well the option optimises public value (social, economic and environmental), in terms of potential costs, benefits and risks
- *Supplier capacity and capability* - how well the option matches the ability of potential suppliers to deliver the required goods and services, and is likely to be attractive to the supply side
- *Potential affordability* - how well the option can be funded from available sources of finance and aligns with sourcing constraints
- *Potential achievability* - how well the option is likely to be delivered given the organisation's ability to respond to the changes required, and matches the level of available resources and skills required for successful delivery

It was agreed to adopt those above.

The critical success factors for Ynni Cymru and their requirements are summarised below in Table 1.

Table 1: Ynni Cymru Critical Success Factors

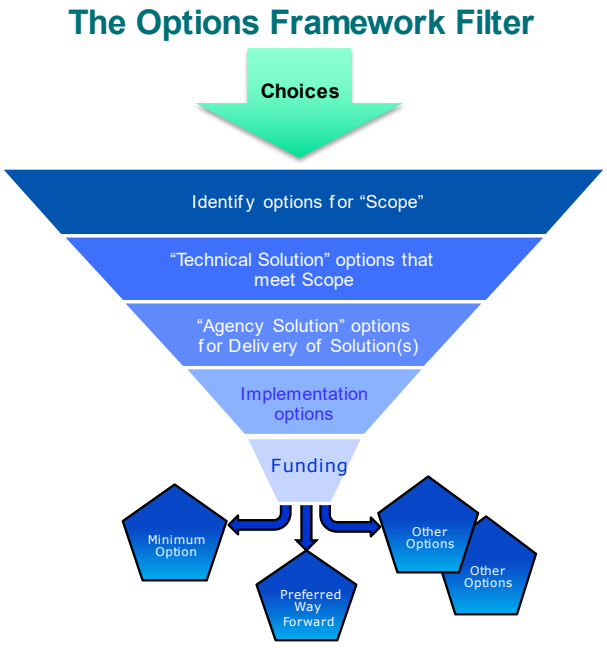
Critical Success Factor	**Requirement**
Strategic fit: How well an option for Ynni Cymru meets the strategic objectives set out in Section 1.	• To expand locally owned renewable energy used and generated in Wales • To optimise the efficiency and effectiveness of locally owned renewable energy use and generation projects • To accelerate the transition and deployment of smart local energy systems across Wales • To facilitate a just transition to net zero, retaining the benefits for Welsh communities
Value for money: How well an option for Ynni Cymru optimises social value in terms of its potential costs, benefits and risks	• Delivers wider benefits beyond development, construction and operation of projects by: o Avoiding carbon emissions o Improving use and generation projects' revenue so that gains can be shared between consumers and generators o Promoting local sourcing and skills development o Retaining and building value in Wales

Critical Success Factor	Requirement
Supplier capacity & capability:	• Existence of suppliers with the required skills and capacity to deliver Ynni Cymru services across Wales • Willingness of supply chain to participate in Ynni Cymru • Ability to recruit and retain key staff at Ynni Cymru
Affordability: How well an option for Ynni Cymru can be financed across its whole life from available funds	• Willingness and ability of Welsh Government to fund Ynni Cymru and bear appropriate risks • Ability to attract funding from other public investors e.g. community investors, local authorities • Ability to build a sustainable funding model through leveraging other funds and generating income
Achievability: How well an option for Ynni Cymru is likely to be resourced and delivered	• Ease of set up maximised while cost of set up minimised • Acceptable balance of risks between WG and other parties • Retains support of key stakeholders

3.3 Longlist of options

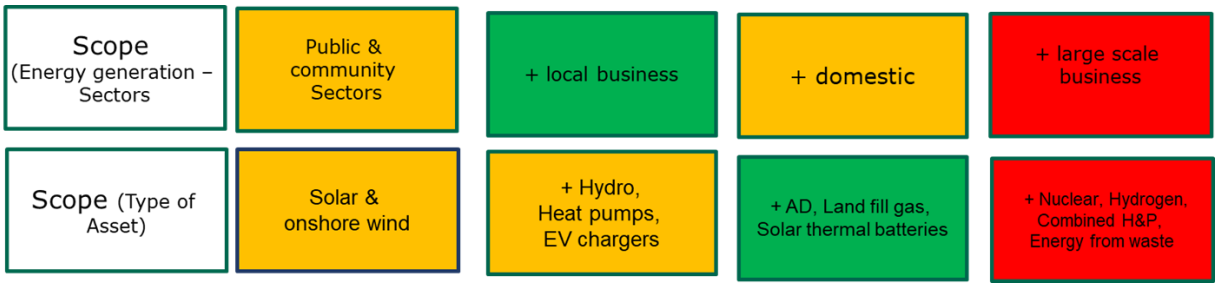
The longlist of options was developed by applying the options framework filter, where the process is:

- Consider a wide range of possible options for each level of choice
- Undertake SWOT (strengths, weaknesses, opportunities, threats) analysis against objectives and critical success factors
- RAG (red, amber, green) rate and select the short list, ruling out any red rated options at each level of choice



3.3.1 Scope

The evaluation of the scopes tested for Ynni Cyrmu were as follows.



Preferred way forward

The sectors in scope are public, community and local business sectors for energy generation, excluding domestic generation, but including domestic consumers.

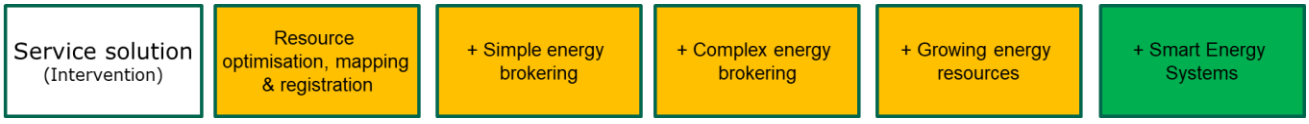
The types of asset in scope are solar PV, onshore wind, hydro, heat pumps, EV chargers, anaerobic digestion, solar thermal and batteries.

The rationale was to extend generation scope to include local business, including farming, which are not currently supported by the Welsh Government Energy Service, so giving greater opportunity for Ynni Cymru to maximise impact through retaining value within communities beyond the community energy sector, while excluding large scale business, as this would risk spreading Ynni Cymru resources too thinly. Similarly, a broad range of generation assets are in scope in order not to limit the ambition and potential of Ynni Cymru, while excluding large scale technologies likely to be supported by other programmes.

In addition it is implicit that Ynni Cymru will cover all of Wales and be concerned with the multi vector energy system including heat, power, and transport.

3.3.2 Solution

The evaluation of service solutions tested for Ynni Cymru was as follows.



Preferred way forward

The service solutions that Ynni Cymru will deliver will include:

- Resource optimisation, mapping and registration
- Growing energy resources
- Simple and complex energy brokering
- Smart Energy Systems

Within the scope already identified, the rationale is to maximise Ynni Cymru's ambition and potential impact by including a full range of service solutions.

3.3.3 Service delivery

The service delivery options tested for Ynni Cymru were as follows.

- WG in-house service
- Part of another WG wholly owned company

- WG wholly owned company
- Independent standalone company
- Public private partnership

Further work is required to test these options against Ynni Cymru's commercial model, which is in development.

3.3.4 Implementation

The evaluation of implementation options tested for Ynni Cymru was as follows.

Preferred way forward

The preferred way forward was phased implementation over 3 years.

The rationale was that 'big bang' implementation of all parts of the scope and solution in Year 1 was undeliverable and that a 4 year phased implementation would delay Ynni Cymru's impact and achievement of objectives.

3.3.5 Funding

The evaluation of funding options tested for Ynni Cymru was as follows.

Preferred way forward

The preferred way forward was a blended funding model, bringing together elements of Welsh Government and wider public sector funding with revenue generated from Ynni Cymru's activities and/or investment from private sector partners.

The rationale was that a full-blown commercialisation model was both unrealistic and potentially counter-productive, as focussing on those services that could make a return would not necessarily deliver what is needed. However, public sector funds should be supplemented by income generation where this was appropriate and feasible.

3.4 Shortlist of options

The Preferred Way Forward from the longlisting exercise is tested against Business as Usual and subjected to an economic analysis where costs and benefits are compared.

These options are summarised below.

Business as Usual

- *Scope* – All projects within the remit of the Welsh Government Energy Service
- *Solution* – Support in establishing local renewable energy projects – no interventions to 'smarten' projects
- *Delivery* – In-house Welsh Government service
- *Implementation* – N/A

- *Funding* – Welsh Government funding

Preferred Way Forward

- *Scope* sectors – Public, community and local business, including farms
- *Scope type of assets* - Solar PV (ground and roof) and onshore wind, hydro, heat pumps, EV chargers, anaerobic digestion, landfill gas, solar thermal, batteries
- *Solution* – Resource optimisation, mapping and registration, simple energy brokering, complex energy brokering, strategic growing of generation resources, Smart Energy Systems
- *Delivery* – further work required
- *Implementation* – Phased over 3 years
- *Funding* – Blended funding

3.5 Economic appraisal

3.5.1 Principles of the economic appraisal

As this is a strategic portfolio business case, the economic appraisal is necessarily at a high level. Further detail will be incorporated as the programme develops and in subsequent iterations of this business case.

The economic appraisal attempts to compare whole life costs of Ynni Cymru with whole life benefits. For these purposes costs and benefits have been modelled to 2035. The benefits have been calculated in value to the local economy (£) and carbon abated (tCO2). Because of the early stage in the life of the programme, proxies have been adopted to measure costs and benefits, which necessarily draw artificial boundaries around Ynni Cymru's interventions, so limiting complexity and potential impact. Some elements of the programme are clearly defined at this stage, but, in other areas, work is still ongoing to scope and understand how Ynni Cymru will intervene to deliver sought after benefits. The appraisal has consequently been carried out reflecting these different levels of certainty, and this is highlighted in the narrative below.

In addition to those benefits which can be quantified at this early stage of the programme, there are a range of important non-quantifiable benefits. Some of these will remain non-quantifiable, but others, as the elements of the programme become more clearly defined, will become quantifiable as part of the subsequent business cases for projects within the overall portfolio. Currently non-quantifiable benefits might include development of skills and jobs to support the green economy, which will subsequently be measured as GVA impact, and citizens' increased adoption of energy saving measures as awareness increases.

While increased value in the local economy, both by increasing the locally owned sector's profitability and by reducing energy costs for consumers, speak to Welsh Government's ambitions for net zero, increasing locally owned renewable energy and reducing fuel poverty, these are not cashable savings for Welsh Government, but benefits for local economies in Wales and the Welsh economy as a whole. In addition, reduction in fuel poverty is likely to deliver benefits to health, and consequently the NHS, by decreasing levels of respiratory illness.

There may be potential to generate revenues from Ynni Cymru activities in the future, but it is not currently clear whether this is desirable or feasible. For this reason, current activity is focussed on a range of pilot activity with different stakeholders to test and validate the business model.

3.5.2 Progress towards Welsh Government's net zero targets

The ambitious plans set out in Net Zero Wales and the four Regional Energy Strategies will not be achieved without significant sustained investment and focus. Ynni Cymru's activities will contribute towards delivering these ambitions and securing the benefits.

3.5.3 Expansion of locally owned renewable energy

Since 2020 explicit targets[1] have been set for an element of local ownership in every new energy projects, so projects create local economic opportunity in addition to meeting renewable energy targets. Academic and other research cited below has evidenced the enhanced economic benefits achieved through local ownership of renewable energy projects:

- Evidence shows that where local ownership and control of renewables infrastructure is a feature, wider behavioural changes required for climate transition (in energy use and efficiency, transport etc.) can be driven by both the development of bespoke local infrastructure and education funded by renewables income, and by the very fact of communities becoming climate-aware via deep engagement in the renewable development process[2]
- Social benefits highlighted in studies have included an increase in the capacity and skills development within the organisation developing the initiative; new social facilities and initiatives subsidised by the newly available revenue streams; strengthening of social and network capital and cohesiveness within the community through the act of developing the initiative; facilitated attitudinal and behaviour change within the wider community, and specifically more positive attitudes towards renewables; an increase the uptake of domestic renewable technologies; and more engagement with climate change and energy issues in general[3]
- Community benefits: The community projects installed can offer up to between 12-13 times as much community value re-invested back into local areas as would be achieved through 100% commercial models[4]
- Community energy provides excellent economic value. Onshore wind in Scotland provides on average 34 times the community benefit of commercial projects. Community energy fuel poverty work delivers at least £9 of social benefit for every £1 spent. In 2021, the sector's most challenging year ever, it worked with more than 51,000 households across the UK and saved £3.35m on energy bills[5]
- The recent Institute of Welsh Affairs report[6] comments

  'Community ownership, local and shared ownership, Community Benefit Funds, local energy cooperatives all bring substantial benefits for communities from a more

[1] Review of Wales' Renewable Energy Targets: summary of responses (gov.wales)
[2] Jones, C., & Munday, M. (2020). Capital ownership, innovation and regional development policy in the economic periphery: An energy industry case. Local Economy, 35(6), 545-565
[3] Bere, J., Jones, C., Jones, S., & Munday, M. (2017). Energy and development in the periphery: A regional perspective on small hydropower projects. Environment and Planning C: Politics and Space
[4] Capener, Peter (2014). Community Renewable Electricity Generation: Potential Sector Growth to 2020: Methodology, Detailed Assumptions and Summary of Results.

An independent report commissioned by DECC that assesses the potential of Community Energy generation under different scenarios
[5] State of the Sector 2023, Community Energy Wales
[6] Wales, the journey to net zero:tackling climate mitigation through accelerated infrastructure investment, Institute of Welsh Affairs 2024

geographically dispersed energy system. Such a system would enable the communities to retain the wealth created from renewable energy schemes, contributing to increasing wealth across communities in Wales.'

Ynni Cymru will work to increase the proportion of renewable energy projects that are locally owned, the assumption being that through Ynni Cymru's activity locally owned renewable energy generation will increase by 5% (an increase of 40 MW over 10 years) against a business as usual trajectory. In this business case the increase of 5% is modelled and research and pilots to validate whether this target feasible and sufficiently ambitious are in progress.

3.5.4 Wider benefits of SLES

EnergyREV assessed the consumer costs and benefits of adopting Smart Local Energy Systems (SLES). The premise is that investing into SLES improves local flexibility through demand-side response (DSR), use of local energy storage and self-consumption from distributed energy resources. SLES delivers a more efficient and productive energy system which reduces the need for investment into national energy systems, including large scale renewables, large grid connected batteries and distribution and transmission networks. The savings are of the order of £1.7bn/year by 2035[7].

3.6 Ynni Cymru specific interventions

Ynni Cymru is operational, having recruited a specialist team, who are working on the following programme of activity. These are:

3.6.1 Stakeholder engagement

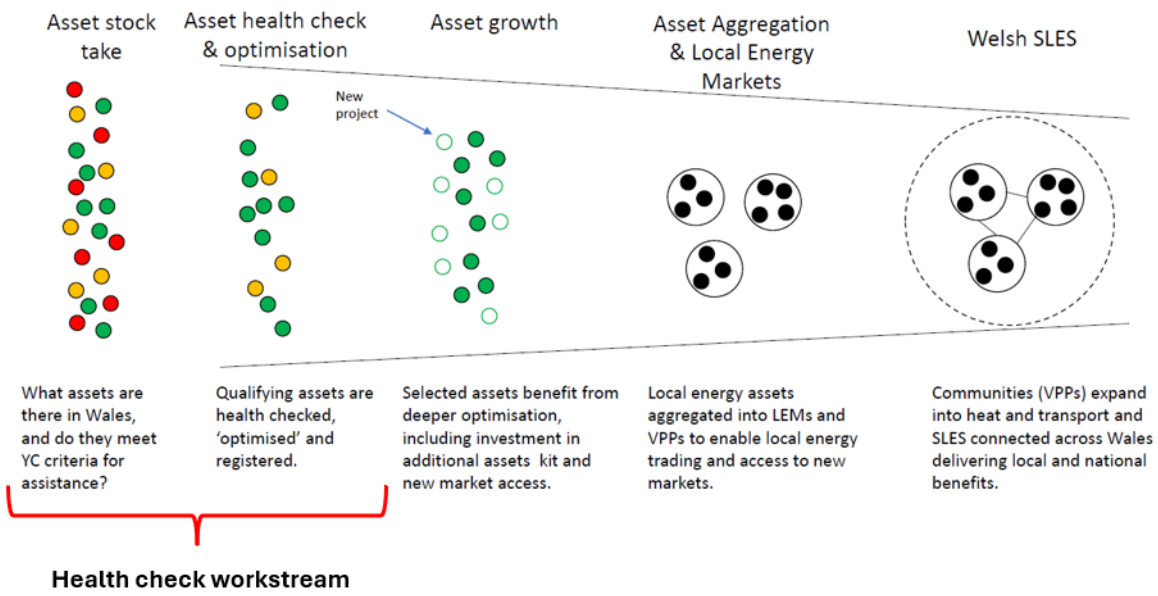
Scope - To ensure that Ynni Cymru develops well, its mission is understood, it has a good reputation and is effective in pursuing its ambitions. Community Stakeholder and Strategic Stakeholder Groups have been established, are operational and provide the fora to maintain two-way dialogue and effective engagement with stakeholders.

3.6.2 Healthcheck

Scope – The healthcheck workstream aims to engage with community and public sector renewable energy generators in Wales to enable Ynni Cymru to better understand the state of the sector and develop targeted support to help generators improve asset performance and make better commercial decisions.

The workstream represents the first stage of Ynni Cymru's planned programme of activities. In the first instance, the health check programme aims to ensure that participating generators are operating effectively, with the vision of enabling further optimisation through the identification of 'smartening' opportunities. The health check workstream also provides Ynni Cymru the opportunity to collect critical data and build relationships with generators, that may enable assets to be aggregated and participate as players in a Smart Local Energy Systems (SLES) in the future. This is illustrated below.

[7] Benefits of flexibility of Smart Local Energy Systems in supporting national decarbonisation, Marko Aunedi, Enrique Ortega and Tim Green, 9 May 2022



3.6.3 Local energy supply

Scope - Local energy supply (e.g., where a local generator sells power to local users) is a long-held ambition within many communities in Wales. This workstream is exploring with stakeholders the models that currently exist (and that could be created) to deliver on this ambition and future opportunities to secure maximum benefits from local energy supply arrangements. There are complexities in many of the models that currently exist for local supply and this workstream will use specialist resource to unpick these complexities to better understand the role that Ynni Cymru can play in realising greater local supply across Wales.

3.6.4 Grid network connection

Scope - to identify issues concerning grid network connections for renewable energy projects in Wales and to understand where Ynni Cymru can focus their resources and capabilities to support these projects. It includes technical, regulatory, financial, and timeline challenges inherent in integrating renewable energy sources into the current grid infrastructure. Emphasis will be placed on recognising barriers and formulating effective solutions to guarantee the efficiency and reliability of grid connections for renewable energy projects.

3.6.5 Heat

Scope – To explore the potential opportunities and challenges for Smart Local Energy Systems (SLES) projects in leveraging locally generated renewable energy focusing on heat, within the context of the broader energy system encompassing power (including energy storage) and transport. The investigation aims to identify strategies that not only create value for energy generators and consumers but also contribute to the flexible management of demand on existing infrastructure. The investigation will encompass various aspects including technical feasibility, regulatory considerations, financial viability, just transition principles, and timeline challenges associated with the development of SLES projects.

3.6.6 SLES

Scope - To investigate the opportunities and challenges for SLES projects in utilising locally generated renewable energy in ways that consider the whole energy system interactions of power (including energy storage), heat, and transport (or any mix of these), whilst also delivering value to generators and offtakers and helping to flexibly manage demand on existing infrastructure. The aim is to understand where Ynni Cymru can focus its resources and capabilities to support SLES projects to completion. Our investigation will examine technical, regulatory, financial, just transition, and timeline challenges inherent in developing SLES projects.

3.6.7 Battery energy storage system (BESS)

Scope - Battery storage and flexibility provision is a key area of focus for Ynni Cymru and a complex and fast-moving area. This workstream will carry out a flexibility & battery energy storage system (BESS) market assessment, which will include an overview of flexibility revenue streams, development of a battery storage decision making tool to be applied to projects, development of a high-level battery revenue cashflow model to give an initial view of whether a project should be taken forward and considering strategic options for Ynni Cymru in the BESS/battery aggregation market.

3.6.8 Capital funding

Scope - To develop a process and arrangements to distribute a £10m capital budget allocated to Ynni Cymru for the financial year 24/25. Objectives will be to ensure the funding is targeted at the most appropriate sectors and projects, to ensure funding delivers maximum alignment and impact with the Ynni Cymru objectives, and to ensure the funding is allocated within the financial year 24/25.

In future years, as Ynni Cymru's programme develops and early work has clarified where investment can make most impact, capital funding requirements will become clearer, along with the specifics of the business cases supporting this investment.

3.6.9 Skills and supply chain

Scope - To understand whether Ynni Cymru has a role to play in local Welsh skills and supply chain development. If so, outline what the skills development and supply chain workstream could look like, and what it could realistically achieve.

For the purposes of the economic analysis, to be able to estimate the costs and benefits attached to Ynni Cymru's activities, we have grouped activity into the seven streams below:

1. More productive generation (health check)
2. Better commercial deals (health check)
3. Increased locally owned renewable capacity (health check, grid and capital funding)
4. Releasing curtailed (wasted) energy supply into the markets with batteries (grid, BESS workstream, cap funding)
5. Asset aggregation (local supply and SLES)
6. Local energy markets (local supply)
7. Smart Local Energy Systems (heat and SLES)

These are described below under the headings of:

- Benefits sought
- Ynni Cymru actions
- Key assumptions
- Estimated costs and benefits

As discussed above, at present some of these activities, (1-3) are more clearly defined than others, (4-7), including the specific nature of Ynni Cymru's interventions and the impact they will have. This necessarily affects the weight that can be attached to the different parts of the analysis. Assumptions have been tested, where possible, against the preliminary results emerging from the healthcheck programme.

3.6.10 Ynni Cymru estimated costs and benefits

Capital costs have been estimated for the delivery of the specific interventions outlined above. In addition will be Ynni Cymru's operational costs, which include the Ynni Cymru team and all associated expenditure, amounting to £2.366m p.a. The effort of the Ynni Cymru team will be spread across the interventions and will fluctuate over time. The cost effectiveness analysis presented in section 3.6.11 includes specific intervention costs and Ynni Cymru operational costs.

Not all the costs required to deliver the benefits will be expended by Ynni Cymru. Ynni Cymru is operating as part of a whole system, where investment by other players is also proceeding to deliver the benefits set out in the seven streams above and supporting the delivery of the Regional Energy Plans. In addition, Ynni Cymru's activities will be stimulating investment from other parts of the system, for example working out the economics of investment in battery storage will lead to more easily justifiable investment in battery storage from other public and private sector players.

The tables below present the cost and benefit assumptions used, although these are illustrative only, given that Ynni Cymru is still in its testing and piloting phase.

1. More productive generation	
Benefits sought	Some existing locally owned renewable energy assets can be made more productive through better maintenance or other technical optimisation. This will enable more energy to be generated, so giving an increase in revenue to the locally owned generator and a reduction in CO2 (assuming increased renewable generation is replacing fossil fuel).
Ynni Cymru actions	Ynni Cymru's healthcheck programme is designed to identify where technical optimisation can achieve more productive generation and encourage generators to adopt best practice. Assumptions are being tested now with the pilot healthcheck programme, amongst the more professional cohort of the sector, and emerging findings suggest that larger assets are more likely to be professionally managed and so less likely to benefit from technical optimisation. Given this, the following assumptions are reasonable.
Key assumptions	1 in 10 local solar/wind assets can be technically optimised Average asset size is 257kW Optimisation increases output by 3.3%

Estimated capital costs	*Estimated benefits*
£0.2m	1.2m Kg CO2 saved £2.7m value of increased local generation

2. Better commercial deals	
Benefits sought	There are wide variations in the price that can be achieved from sale of energy to offtakers. By maximising the price locally owned generators receive, projects can become more profitable and more value be put into local economies.
Ynni Cymru actions	Ynni Cymru's healthcheck programme will identify where better Power Purchase Agreement (PPA) deals are available and signpost generators to them. The healthcheck programme demonstrates that the time when generators signed up for PPAs significantly influences the potential for improving deals. However, as the amount of power produced is a driver for a better price, the potential to aggregate generators via Ynni Cymru to access a commercial platform tendering to offtakers is being explored. Given the early nature of these conversations the following assumptions are reasonable.
Key assumptions	3 in 10 (1/10 for the sensitivity analysis) local solar/wind assets can be commercially optimised. Generation is calculated from load factors (solar 11% and wind 35%). Commercial uplift is 10% improvement in PPA price using wholesale market prices as a baseline.

Estimated capital costs	*Estimated benefits*
£0	£23.9m value of improved revenue £8.0m for reduced commercial benefit

3. Increased renewable capacity	
Benefits sought	Assuming the increase in renewable energy generated is achieved to reach Welsh Government net zero targets, then Ynni Cymru is seeking to increase the proportion of the renewable energy generated that is locally owned, in accordance with Welsh Government ambitions.
Ynni Cymru actions	There are three ways that Ynni Cymru will act to achieve increased renewable capacity: • Investment in SLES projects via community groups. Ynni Cymru will provide capital grants to community groups for investment in SLES projects that meet agreed criteria • Facilitation of co-investment by communities and community groups in larger, developer led projects. Ynni Cymru will provide advice and guidance to community groups on entering into agreements with developers and help them achieve best value • Through Ynni Cymru's activities in supporting better commercial deals, facilitating easier grid access and integrating assets, new renewable projects will be easier and quicker to develop, thus shortening the development timescales
Key assumptions	Local ownership of renewables in Wales will increase from 16% to 21% by 2035. This is an increase of 40MW over 10 years. The cost of solar and wind decreases over time and starts at £0.68m and £1.3m per MW, respectively

Estimated capital costs	*Estimated benefits*
£8.2m (The capital cost of adding 40MW of renewable assets, split between solar and wind)	Value of locally generated energy £39.8m

4. Releasing curtailed energy supply into markets via batteries	
Benefits sought	There are significant amounts of locally owned renewable energy that cannot be transmitted to the grid because of lack of grid capacity. This happens particularly when conditions are good for the generation of solar and wind power and means that energy generated is wasted. Using batteries to store this extra energy and then release it to markets when supply is lower (and demand higher) means that projects will be more productive, revenue will increase for generators and CO2 will be abated by more renewable energy being available at peak demand.
Ynni Cymru actions	Ynni Cymru will work specifically in areas and with generators where there is curtailment to invest in batteries to soak up excess capacity, which can then be released to the energy markets. The healthcheck process has identified some significant curtailment in projects and will continue to highlight this, so capital investment in batteries can be targeted appropriately. Until more data is available the following assumptions are reasonable
Key assumptions	1% of electricity is curtailed in Wales Enough batteries to soak up all the curtailed capacity is modelled One MWh of battery can absorb 200MWh of curtailed electricity over a year, to determine how many MWh of batteries to avoid curtailment The value of curtailed electricity is the wholesale price, using Aurora figures

Estimated capital costs	*Estimated benefits*
£18.6m (capital cost of batteries to soak up 100% of curtailed electricity)	Value of avoided curtailment £7.7m Carbon saved 3.6m Kg CO2

5. Asset aggregation	
Benefits sought	Access to flexibility energy markets, where prices vary over the day according to supply and demand is only available to generators in excess of 1MW. Many locally owned generators have smaller capacity, and so an aggregation service that would allow smaller generators to access these better commercial deals through flexibility markets would bring benefits to the local economies.
Ynni Cymru actions	Ynni Cymru will act as an aggregator, identifying through the healthcheck process those projects that could operate together as a 'virtual power plant' and supplying advice and technical support for the operation of virtual power plants. Given the stage of the programme the following assumptions are reasonable.
Key assumptions	3 in 10 local energy assets can be aggregated to get better commercial deals (PPAs) 3 in 10 (1/10 for the sensitivity analysis) local solar/wind assets can be commercially optimised with a 10% wholesale price uplift For batteries, 5% of total batteries can be aggregated to sell flexibility services The value of flexibility services is estimated from Modo Energy at £47k/MW/year

Estimated capital costs	*Estimated benefits*
£0.7m (Cost of monitoring and communications for renewables and DERMS for batteries) £0.4m for reduced commercial benefit	Value of PPA uplift £28.8m Value at reduced commercial benefit £12.9m Value of flexibility services £4.9m

6. Local energy markets	
Benefits sought	There is a strong appetite from locally owned renewable energy generators to be able to operate local energy markets where benefits can be shared between the generator and local energy customers. Local customers are most likely to want cheaper fuel bills and Welsh Government wishes to alleviate fuel poverty. While local energy market models are in operation in some places, they vary and are not simple to replicate, coming up against regulatory issues in some cases.
Ynni Cymru actions	As this is a key benefit sought by stakeholders, this is an area where Ynni Cymru is investing time and effort with the intention of being able to develop a replicable local energy market model through a specific workstream. This is not yet in operation, so for the purposes of the calculation figures from one of the operators in this market have been used.
Key assumptions	The 5% of additional local electricity generation facilitated through Ynni Cymru activity can participate in local energy markets. This is 40MW and 35,1587 MWh 10% discount on retail electricity prices is possible (219% of wholesale prices provided by Aurora)

Estimated capital costs	*Estimated benefits*
£1.0m	Local energy cost saving £8.7m

7. Smart Local Energy Systems	
Benefits sought	SLES will improve local flexibility through demand-side response (DSR), use of local energy storage and self-consumption from rooftop solar PV. Customers within SLES schemes should see a reduction in their electricity bills compared to non-SLES customers, driven by enhanced flexibility, higher self-sufficiency and upgraded energy efficiency. In addition, there will be reduced total system cost through avoidance of reinforcement of local distribution networks by reduced peak demand, and reduced cost of investing in low-carbon generation to meet the net-zero carbon target through better generation utilisation.
Ynni Cymru actions	Ynni Cymru's actions are being developed through the specific workstream, including targeting capital investment at opportunities for 'smartening' projects.
Key assumptions	This workstream is at too early a stage to be able to develop any reasonable estimates of costs and benefits.

3.6.11 Cost effectiveness analysis

Costs and benefits were compared over the eleven-year period to 2035, and the results are set out in the table below. Three scenarios were modelled (low, medium and high), where the amount of renewable technologies deployed in Wales in 2035 varies. Modelling

assumptions were drawn from the Regional Energy Strategies for Wales for the medium case and the DNO Distributed Energy Scenarios for the high and low. In addition, sensitivity analysis was carried out for the proportion of assets that could benefit from enhanced commercial deals, affecting the interventions of 'better commercial deals' and 'asset aggregation'.

The assumptions underpinning these scenarios are shown below. The Ynni Cymru Medium Scenario is medium capacity and higher commercial.

Case	**Amount of low carbon energy in Wales in 2035 MW**	**Commercial assumptions**
Low Scenario	4,474	
Medium Scenario	5,748	
High Scenario	7,216	
Higher commercial		30% assets can benefit from enhanced commercial deals
Lower commercial		10% assets can benefit from enhanced commercial deals

Scenario	**Costs capital (£m)**	**Costs revenue (£m)**	**Benefits (£m)**	**Net benefits (£m)**	**Cost Benefit Ratio**	**Carbon benefits tCO2**
Ynni Cymru **Medium Scenario** (**higher** commercial benefits)	28.6	23.7	111.6	59.3	2.1	4,857
Ynni Cymru **High Scenario** (**higher** commercial benefits)	34.4	23.7	134.6	76.5	2.3	5,787
Ynni Cymru **Low Scenario** (**higher** commercial benefits)	20.5	23.7	79.8	35.6	1.8	3,510
Ynni Cymru **Medium Scenario** (**lower** commercial benefits)	28.3	23.7	79.8	27.7	1.5	4,857
Ynni Cymru **High Scenario** (**lower** commercial benefits)	34.0	23.7	96.4	38.7	1.7	5,787
Ynni Cymru **Low Scenario** (**lower** commercial benefits)	20.2	23.7	56.9	12.9	1.3	3,510

3.7 Conclusion

With the caveat that the economic modelling carried out is based on current best estimate assumptions for seven streams of activity that may not completely align to Ynni Cymru's activities when the current testing and piloting phase is complete, the economic case identifies Ynni Cymru High Scenario as the best performing option. It is considered prudent to continue to base continued development of Ynni Cymru on the Medium Scenario, using a medium estimation of the speed and ambition of the move to net zero over the period to 2035.

Ynni Cymru Medium Scenario has a cost benefit ratio of 2.1 and additional avoided carbon benefits of 4,857 tCO2 demonstrating good value to the public purse.

The lower commercial benefits cases, modelled as sensitivity analysis, still demonstrate a positive cost benefit ratio for all of the scenarios presented above.

It should be noted that the economic analysis above is based on a range of broad assumptions that will be refined as Ynni Cymru evolves. These assumptions include the level of increased performance from optimisation of assets, commercial uplift in revenue from projects, reduced curtailment on the network and increases in electricity supplied through local energy markets.

4.0 THE COMMERCIAL CASE

4.1 Introduction

The commercial case describes how the services needed for the programme will be procured according to good procurement practice and process, and the principles of commercial deals required. However, because of the early stage in the programme, and that this is a strategic portfolio business case, the commercial aspects of Ynni Cymru's activities are to be developed and it is not yet clear what will need to be. Later programme and project outline business cases making up the portfolio will articulate these more clearly.

Elements of the commercial case are being piloted, researched and tested across the range of activity Ynni Cymru is currently undertaking.

4.2 Commercial principles for Ynni Cymru

This section sets out the overarching commercial principles by which Ynni Cymru will act, which will be developed further as Ynni Cymru's commercial activities become clearer.

4.2.1 Good procurement practice and process

Ynni Cymru will follow good procurement practice and process, taking into account current legislation and best practice to ensure that opportunities for supplying goods and services are advertised widely and that transparent processes are used to select successful suppliers.

4.2.2 Market testing

At the appropriate time market testing will be undertaken to ensure that, as far as possible, Ynni Cymru's offers to the market are met with credible and value for money responses from potential suppliers.

4.2.3 Welsh suppliers

Opportunities will be advertised to suppliers in Wales, and as far as possible and practicable, within the rules, community-based Welsh suppliers will be preferred.

4.2.4 Building the supply chain

Ynni Cymru will consider how, acting together with WG and other partners, it can support and build local supply chains within Welsh communities, including what Ynni Cymru can do to increase local jobs and ensure local resilience.

4.2.5 Developing skills for a green economy

Ynni Cymru will work with WG to ensure that its programme of activities supports the development of skills in Wales necessary for building a successful green economy and delivering a 'just' net zero.

5.0 THE FINANCIAL CASE

5.1 Introduction

The financial case considers the whole life costs of Ynni Cymru and the sources of funding available. While the economic case estimates costs across the whole system in Wales, the financial case should take into account only those costs that Ynni Cymru and related projects will incur and from where these activities will be financed.

Because of the early stage of this business case, it is not yet clear where Ynni Cymru specific investment will make maximum impact. Current capital funding is directed towards projects' 'smartening' activities, and which can be deployed in the current financial year. Ynni Cymru is in a rapid learning phase and will wish to deploy capital to accelerate that learning by understanding how to develop well-functioning and replicable SLES' in a variety of settings. Ynni Cymru capital will therefore, in future, be deployed to support innovation in projects with the aim of testing different SLES models.

In addition, as part of WG's ambition to smarten projects or expand renewable energy capacity, Ynni Cymru will deploy capital where locally owned projects are in a position to smarten/expand capacity but cannot access sufficient (or affordable) funding to do so, i.e. where there is 'market failure'.

Further development of Ynni Cymru will enable capital requirements to be firmed up, as the roll-out of activity reveals where Ynni Cymru can make the most impact and the costs of intervention are understood in greater detail.

In addition, not all Ynni Cymru activities will require deployment of capital, as the team and specialist support procured will deliver benefits through advice, rolling out best practice and replicable models, and facilitating aggregation of smaller projects.

5.2 Ynni Cymru costs

5.2.1 Operational costs

Revenue cost estimates are included from 2025-26 onwards. Annual revenue costs are estimated at £2.366m inclusive of team costs and on costs, specialist technical input and office lease costs. This level of revenue will be sufficient to bring Ynni Cymru to a 'steady state' where it can lead the delivery of work across the seven streams detailed. When the long term operating model and structure for Ynni Cymru is confirmed, revenue costs will be reviewed.

5.2.2 Capital costs

At this early stage of development, it is extremely difficult to quantify the amount of capital funding required by Ynni Cymru, which, at this stage, will be spent on:

- Supporting innovation to test different SLES models in various settings
- Co-investing in locally owned projects to expand and smarten renewable energy capacity

The Welsh Government budget for 2024-25 has allocated £10m capital funding for Ynni Cymru to fund the deployment of specific SLES projects across Wales.

It is proposed that a Capital Grant Scheme will be launched post business case approval that will target the rapid deployment of SLES projects across Wales. This scheme will

provide Ynni Cymru with intelligence around future likely capital requirements for the programme that will be informed by uptake and need.

Once the building blocks and the costs of successful SLES' are known then a programme of activity will be planned according to the capital funding available. Future Ynni Cymru investment capital will be applied for in line with WG budget rounds and based on rigorous business case justification. Individual project level outline business cases will be required in many cases to support future investments.

5.3 Affordability and funding

Financial implications for Ynni Cymru are estimated at £2.366m revenue and £10m capital for each of the next three years (from 2025-26), should the programme continue as envisaged. This will be considered alongside other policy ambitions as the Welsh Government's budget allocations are made.

6.0 THE MANAGEMENT CASE

Introduction

The management case considers the arrangements in place to ensure that the portfolio is delivered successfully. These are:

- Governance
- Resourcing of the portfolio
- Structure of Ynni Cymru
- Programme and key milestones
- Risk management and assurance
- Benefits realisation

6.1 Governance

The current arrangements are as shown below.

The **Cabinet Secretary** for Economy, Energy and the Welsh Language is the decision maker.

The **SRO** is the Deputy Director of Energy for Welsh Government.

The following organisations are members of the **Strategic Stakeholder Group**.

Organisations on Strategic Stakeholder Group
Welsh Government
Community Energy Wales
Welsh Government Energy Service
WLGA
Uchelgais Gogledd Cymru (representing north Wales)
Pembrokeshire County Council (representing south west Wales)
Rhondda Cynon Taf Borough Council (representing the Consortium of Local Authorities Wales (CLAW))
Cardiff City Council (representing Cardiff Capital Region)
Ceredigion County Council (representing mid Wales)
SP Energy Networks
National Grid Electricity Distribution (NGED)
Ynni Cymru Local Partnerships

The **Community Stakeholder Group** currently consists of representatives of community energy organisations that have received resource grant funding from Ynni Cymru. Over time it is envisaged that a wider range of community representatives will be invited to include those communities that do not currently benefit from local renewable energy projects.

The **Ynni Cymru team** is led by Local Partnerships..

The Ynni Cymru programme is governed through a WG Management Group led by Energy Division. The Management Group provides oversight and assurance to the work of Ynni Cymru.

For the forthcoming phase of the programme, it is proposed that Ynni Cymru report into a suitable WG Programme Board.

The Programme Board will include Executive, Senior Supplier and Programme Assurance roles. The Senior User role will be fulfilled by the Chair of the Strategic Stakeholder Group, as it consists of industry members from the community sector, public sector and the energy sector.

Role	**Purpose**	**Name and/or organisation**
The Executive	The Executive is ultimately accountable for the programme success and has the veto on any decision making. He is Chair of the Programme Board.	Deputy Director for Energy, WG
Senior User	The Senior User represents the viewpoint of the users and is tasked with specifying, then delivering the business benefits of the project	Strategic Stakeholder Group
Senior Supplier	The Senior Supplier represents those who will design, develop, facilitate, procure, and implement the programme's products. This role is responsible for the technical integrity of the project.	Local Partnerships
Programme Assurance	Programme Assurance will provide assurance to the Executive that the programme is being delivered according to best practice and that it is on track to deliver the benefits.	WG finance and governance leads

This is illustrated below.

The proposed makeup of the Programme Board is shown below.

Role	**Organisation**
Executive and Chair of Board	Welsh Government
Senior WG Energy Division representative	Welsh Government

Senior Supplier	Local Partnerships
Senior User	Likely to be non-exec director with sector knowledge
Ynni Cymru Programme Director	Local Partnerships
Programme Assurance	Welsh Government Legal Welsh Government Finance

Ynni Cymru Programme Manager will support the Board's operations.

6.2 Resourcing

Ynni Cymru is currently operating as a programme within Welsh Government, delivered by Local Partnerships. The team has been built to 10 FTEs at the beginning of 2024, with capacity and expertise in place to deliver the healthchecks and develop and deliver the other activities in the workstreams.

Future resourcing requirements will be decided based on further development of the business case for the operational phases of Ynni Cymru.

6.3 Programme and key milestones

Ynni Cymru is currently in establishment phase, which will last until March 2025. During this time, as described in this business case, Ynni Cymru will pilot and develop its activities to secure maximum impact for the funding available.

During the operational phase, between 2025 and 2035 activity will start with the healthcheck programme, which will identify opportunities to grow and smarten existing projects. The other workstreams will develop programmes of activity according to the results of the piloting and development phases currently underway in the following areas:

- Project development, support and delivery (including health checks)
- Local energy supply
- Grid support
- SLES (including battery storage, heat and transport)
- Capital Funding Scheme
- Skills and supply chain

This is not an exhaustive list, as Ynni Cymru will react to opportunities and challenges as they arise during its operational phase.

6.4 Risk management and assurance

The key risks of the programme are identified in the Strategic Case. Risks will be managed according to Welsh Government's risk management framework.

There will be an ongoing process of:

- Risk identification
- Controls (to reduce the risk to within the risk appetite)
- Assurance

Risk and issues will be considered, recorded and updated regularly and, along with controls, reported to the Programme Board.

It is anticipated that once this Strategic Portfolio Business Case is completed, Ynni Cymru will be subject to a Gate 0 assurance review, and that further assurance reviews will be scheduled as the portfolio progresses.

6.5 Benefits realisation

As the programme develops and Ynni Cymru's range of activities are defined and established, desired benefits will be attributed to each workstream, and processes put in place to measure their achievement over time. Progress will be tracked and reported to the Energy Programme Board.