



The National Trust approach

Keith Jones, Head of Hydro Projects,
National Trust



Ymddiriedolaeth
Genedlaethol
National Trust

Learning from the past.
Fit for the future

National Trust

Keith Jones



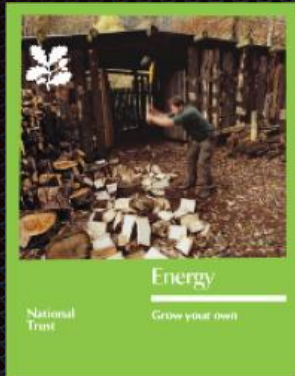
Craflwyn 1930



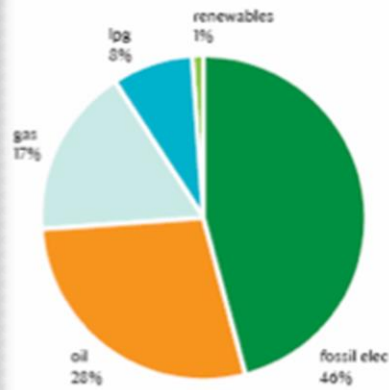
Hafod y Llan 2014



Ymddiriedolaeth
Genedlaethol
National Trust

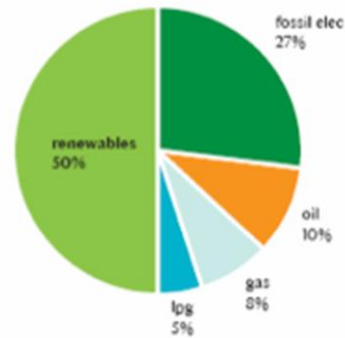


Energy shift 2008 – 2020



2008

Energy consumption = 86,193 MWh total
(of which c. 99% = fossil fuel)

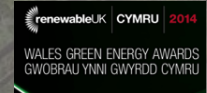


2020 goal

(after 20% efficiency reductions)
Energy consumption = 68,954 MWh total
(of which 50% = fossil fuel)

Context

Our work on
renewables





Ymddiriedolaeth
Genedlaethol
National Trust



Context

- 2 gold mines
- 39 villages
- 88 castles
- 300 mansions
- 700+miles of coast
- 2000 agricultural tenants
- 3749 oil tanks
- 5000 staff
- 29,000 buildings
- 42,000ha of woodland
- 61,000 volunteers
- 250,000ha of land
- 4.3million members
- £6.5m Energy spend
- 15 million visitors
- and 61 pubs...





Ymddiriedolaeth
Genedlaethol
National Trust

Hydro past and future

- Context
- Heritage
- Hidden Hydros
- Research and development
- Partnerships / communities
- Current Program
- ...and next?
- Challenges



Dyffryn Mymbyr 1932

Hydro Heritage

- Cragside x 3
- Quarry bank mill x 3
- Castle Drogo x 2
- Hafod y Llan x2
- Craflwyn
- Batemans
- Pattersons
- Knightshase
- Dyffryn Mymbyr
- Ysbyty Ifan x 3
- ...and on and on and on



Community Hydro Energy



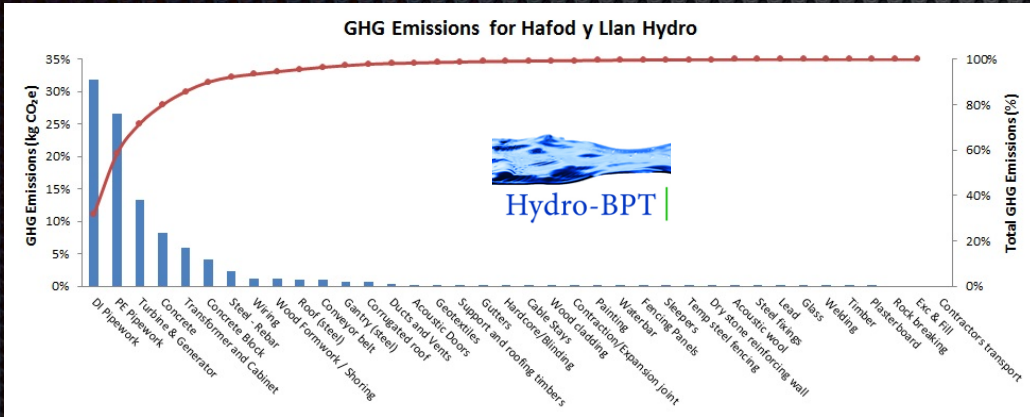
- Lease
- Whole life technical support x 8 hydro projects
- Part of the project teams
- Grant coordination
- Active participation
- Tenant support
- Brand power





Ymddiriedolaeth
Genedlaethol
National Trust

Research & Development





Ymddiriedolaeth
Genedlaethol
National Trust

Current work



Cragside 20kw



Hafod y Porth 100kw



Hafod y Llan 660kw



Quarry Bank Mill 50kw



Gorsen 15kw



Morden 7kw



Stickle Ghyll 100kw



Surveying x 40

Tools we have developed

- Development contracts
- Trading approaches
- Framework for whole life
- Moving away from design and build
- Delivery team
- Lightweight buildings / prefab / new tech'



Ymddiriedolaeth
Genedlaethol
National Trust

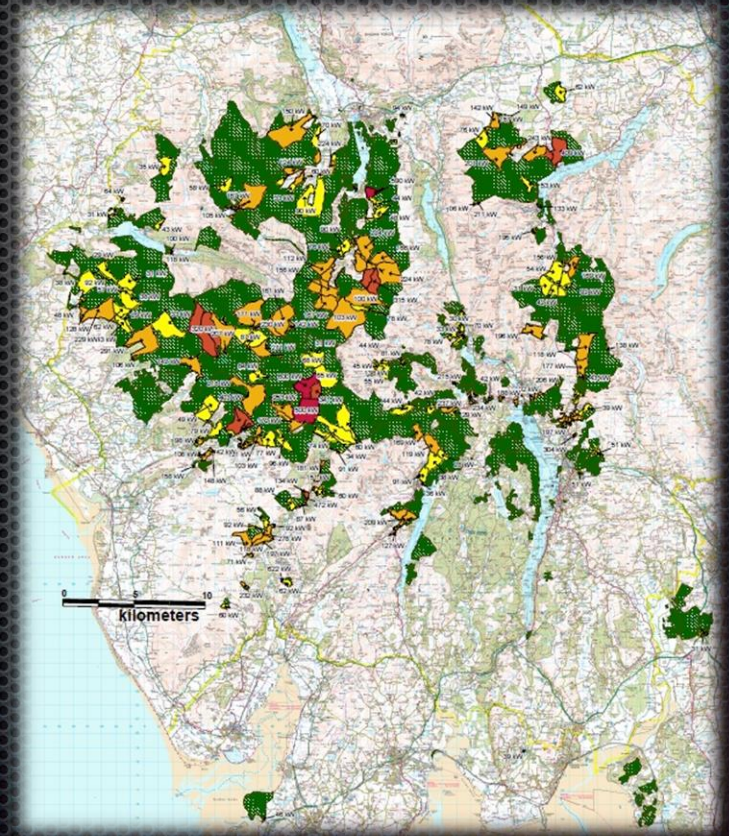
Lessons to date

- It will take longer...!
- Go contract light...
- Become a better client
- You can do a lot yourself
- 3 engineers = 4 solutions
- Value engineering does work
- Paul's brush...!



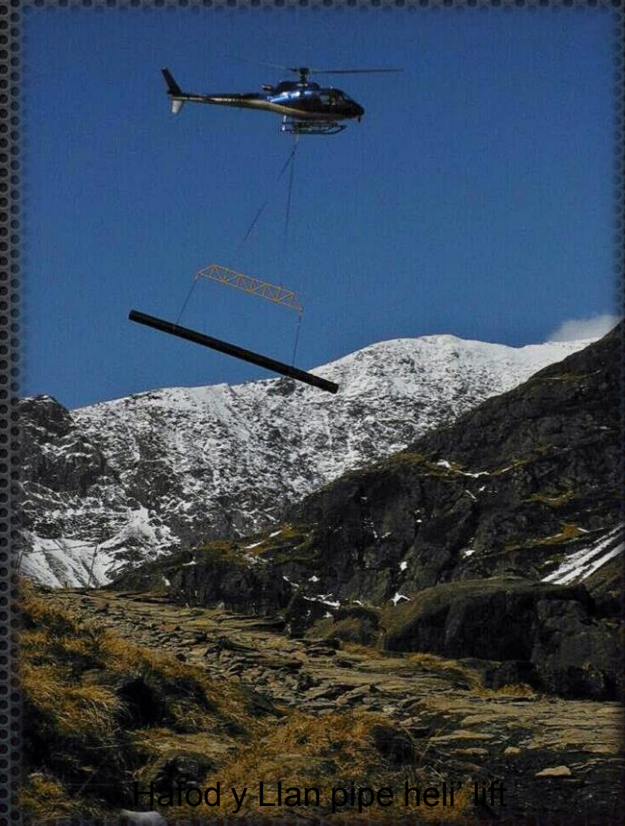
...and next?

- Renewable energy investment program. NTRE
- Aggregated PPA's?
- 6 next year. 12 the year after?
- Peco R&D??
- Ecological impact support?
- More community development

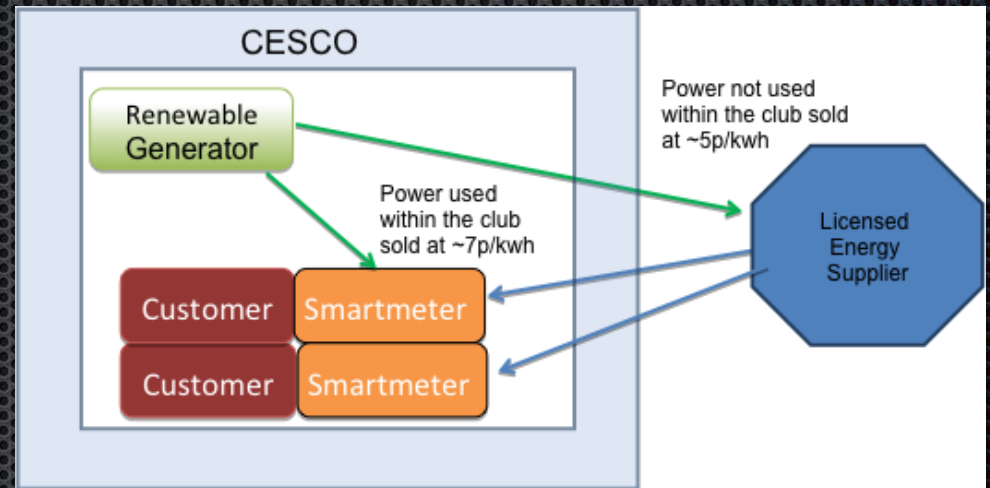
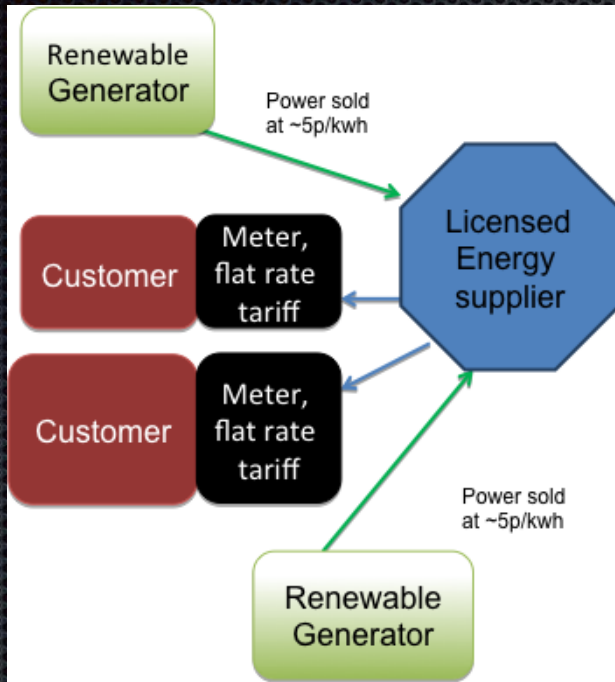


The challenges

- Long hydro development vs. short FIT windows.
- Statutory bodies capacity
- Local grids heating up (pegging back capacity)
- Interpretation of the 'precautionary principal



Solutions?





Ymddiriedolaeth
Genedlaethol
National Trust

Thank you

<http://ntenvironmentalwork.net/category/energy-generation/hydro>



Fit for
the Future

[Home](#)

[About Us »](#)

[News »](#)

[Members »](#)

[Events »](#)

[Contact Us](#)

[Support Us](#)

[Join](#)

<http://ffit.org.uk/>



Fit for the Future is a solution-based network for organisations that want to reduce energy bills and better manage environmental impacts. Through sharing and collaboration, we enable practitioners to move forward with energy efficiency and generation projects.