Not FIT for the purpose

Rumford Club Debate

BRIAN MARK, RAB, TECH DIRECTOR
Mott Macdonald Fulcrum

FULCRUMCONSULTING

What is the FIT trying to achieve?

What are the drivers?

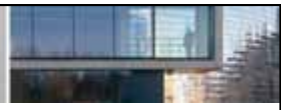
- Climate Change Act
  80% CO_2 reduction by 2050, 34% by 2020
- Renewables Obligation & EU Directive
  15% UK renewable energy (>2% now), of which 35%ish via grid by 2020 (5.6%now)
- PPS1 Supplement: Planning & Climate Change
  MITIGATION: Plan for development to reduce climate change and ADAPTATION: development that survives it when it happens

LEGALLY BINDING FUTURE RENEWABLE ENERGY TARGETS 15% in 2020, 2% now

Is it a FIT way to achieve these herculean targets?

Sector Targets in GW	2007	2012	2020
Built environment areas in green			
Onshore Wind	2	4	13
Offshore Wind	0.3	4	18
Large scale Biomass/SRF CHP	0.6	3.7	16
Built Environment	_	1	5
Wave and Tidal	_	0.07	0.35

DEFINITION OF ZERO CARBON is it FIT for future new construction



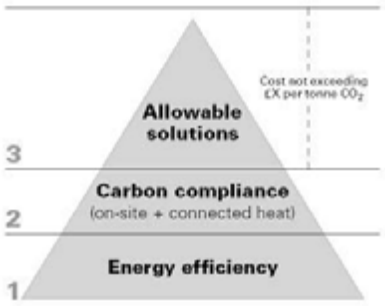
Current and Proposed

Current

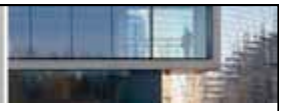
- Where net carbon dioxide emissions resulting from **ALL** energy used in the dwelling are zero or better
- It requires **ALL** renewable energy to be generated on-site or delivered via Private Wire

Proposed

- Hierarchical approach requiring:
  - High-levels of energy efficiency
  - Mandatory level of on-site carbon mitigation to 70% of 2006 Pt L
  - "Allowable solutions" for dealing with the remaining emissions
  - CSH levels 5 & 6 will need to be revised accordingly in CO2 terms- is Code level 41/2 the new level 6?

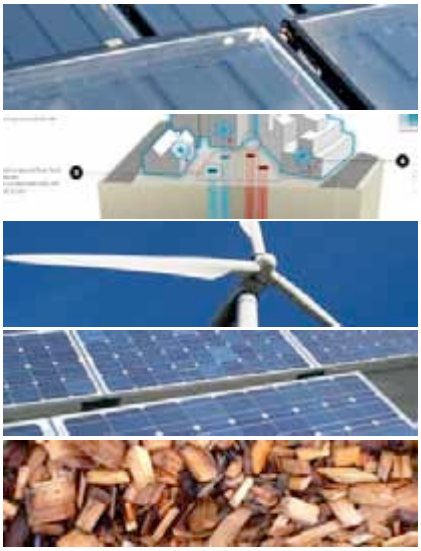


ALLOWABLE SOLUTIONS



- Carbon compliance beyond the minimum standard up to 100% of total energy
- Energy efficient appliances or advanced controls systems
- Exporting LZC heat/cooling to existing properties
- Section 106 Planning Obligations
- Retrofitting EE measures to existing stock
- Investment in LZC energy infrastructure (within UK and with 'benefits of ownership' passed to purchaser)
- Off-site renewable electricity via 'direct physical connection'
- Any other measures that Government might in future announce as being eligible

NOT MANY URBAN MICROGENERATION OPTIONS



- SOLAR THERMAL

Pricey in terms of £/Kg CO2 saved but probably worth it but RHI not FIT

- GROUND SOURCE COOLING/ HEATING

On balance it's a good idea but again its RHI

- WIND TURBINES

Generally not good enough wind in the towns and cities where 80% of us live , go large where FIT =ROCs anyway!!

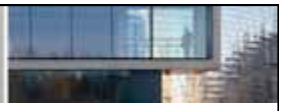
- PHOTOVOLTAIC CELLS

Not enough roof or money and if you wanted a solar power station I can't think of a more expensive way of exporting 90% of the power

- BIOMASS/WASTE

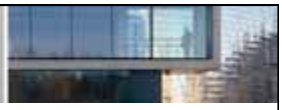
Central rather than small plant for better audit/control of emissions why a one off bet on FIT? For something so important

Feed in Tariff - some financial issues



- No “deeming” so it wont help development finance where the developer pays , the buyer gets the income but still doesn’t want to pay the value of a low carbon home or building
- No “deeming” so the capital starved poor will rarely be able to afford the microgeneration equipment- they don’t own the roofs above them even if they could raise the money
- But energy supply tariffs will rise to pay for FIT so the fuel poor will pay for the middle classes to make a few bob and have something to talk about at dinner parties (ok- same problem for ROCs except for the dinner parties)
- If government sees this argument as a reason to reduce ROC support we will disrupt the most efficient scale of renewables

Feed in Tariff - some technical issues



- FIT is an incentivisation mechanism until 2037 and then it will be gone - are we really sure that we want the fuel poor to support Chinese PV manufacturing jobs till then, we waited too long, Germany didn’t and now has a FIT driven PV industry.
- By 2037 we are going to be warmer not brighter so why is PV such a good idea for the UK anyway where large scale off-shore wind and marine renewables can have some of the highest yields in the world
- I fully support the FIT separation between energy generation and grid export at 5p/Kwh, but smart meters are coming to everyone by 2020- why force the provision of export meters before then, it’s a waste of money, effort and carbon in making and installing them? Thank You