

Transition Towns and Tradable Energy Quotas

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and David Fleming

London School of Economics
Thursday 1st July 2010

darkOptimism

A better future for a troubled world



Visions of the future

Visions are extremely important and powerful

And dangerous

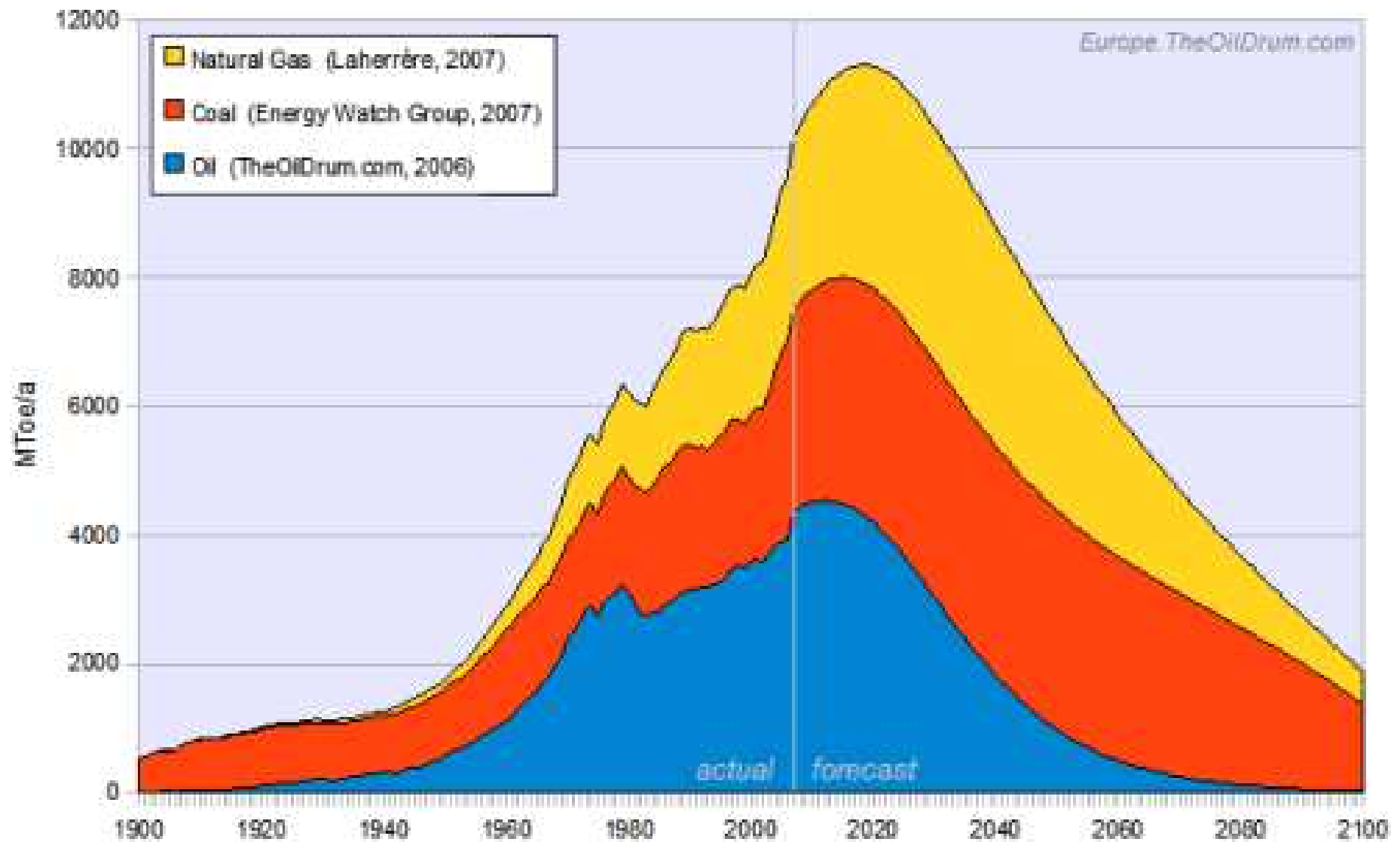
It is important to be 'unrealistic', yet grounded in realism

So Transition's starting point is a reality check

The big issues

1. Energy depletion (peak oil)

Conventional Fossil Fuels



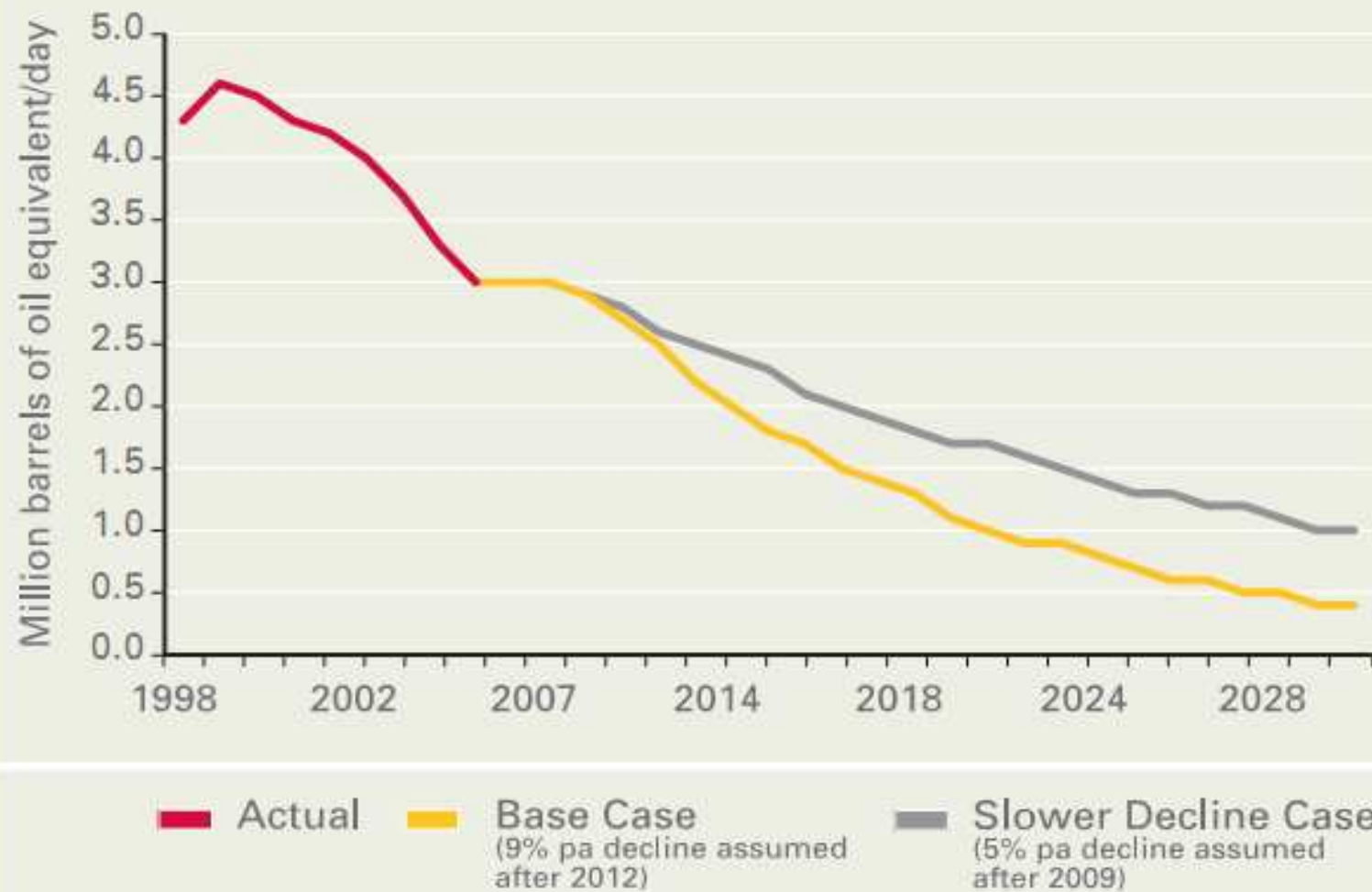


FIGURE 4.2 ACTUAL AND POSSIBLE FUTURE UKCS OIL AND GAS PRODUCTION

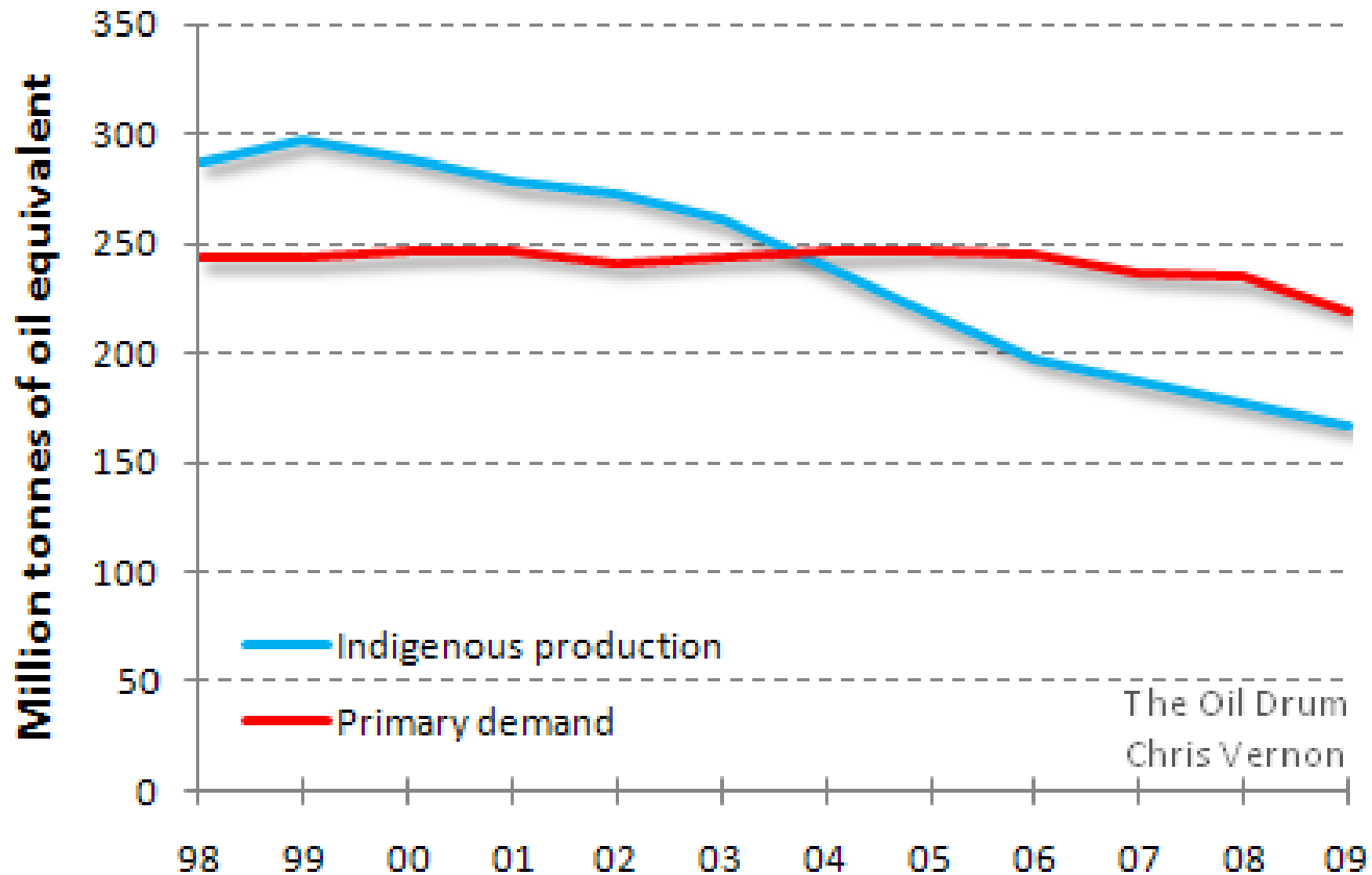
Source: DTI, 2007

UK oil production peak: 1999

UK energy trends

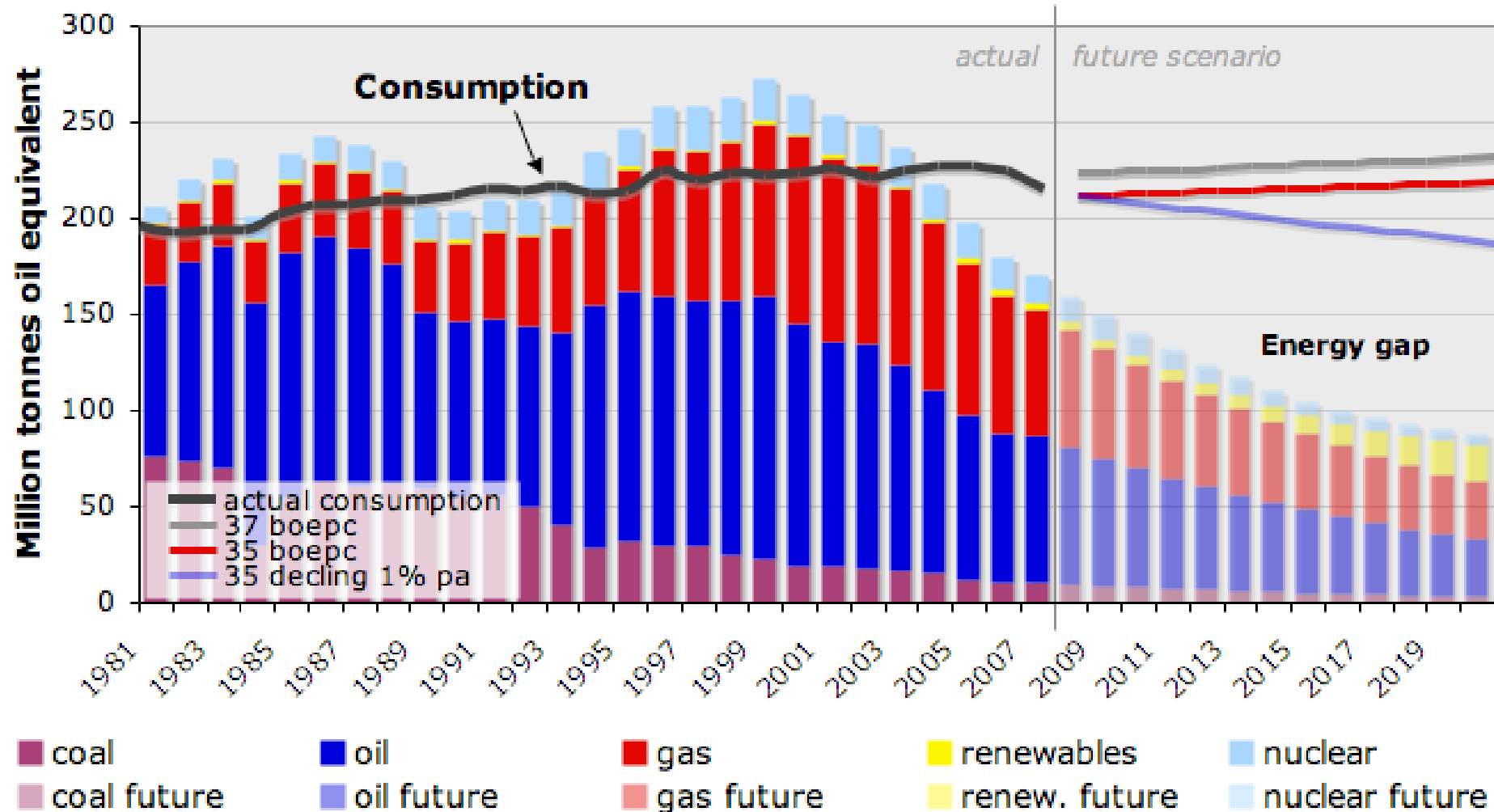
- Oil production down 6%, natural gas production down 9%, coal production down 12.5%. Total energy production down 6.5%.
- Wind, hydro and other renewable electricity supply down 6.5%, with hydro down 44%.
- UK primary energy production down almost 50% on 2000.
- Gas demand up 13%, electricity consumption up 2.5%. Final energy consumption up 4%, up in all sectors except transport. Net gas imports up 46%
- Annual energy deficit in 2008 was 57.5m tonnes of oil equivalent. Cost? Approx **£10bn**
- Chris Huhne: “*The era of cheap energy is over*”

UK Aggregate Energy Balance

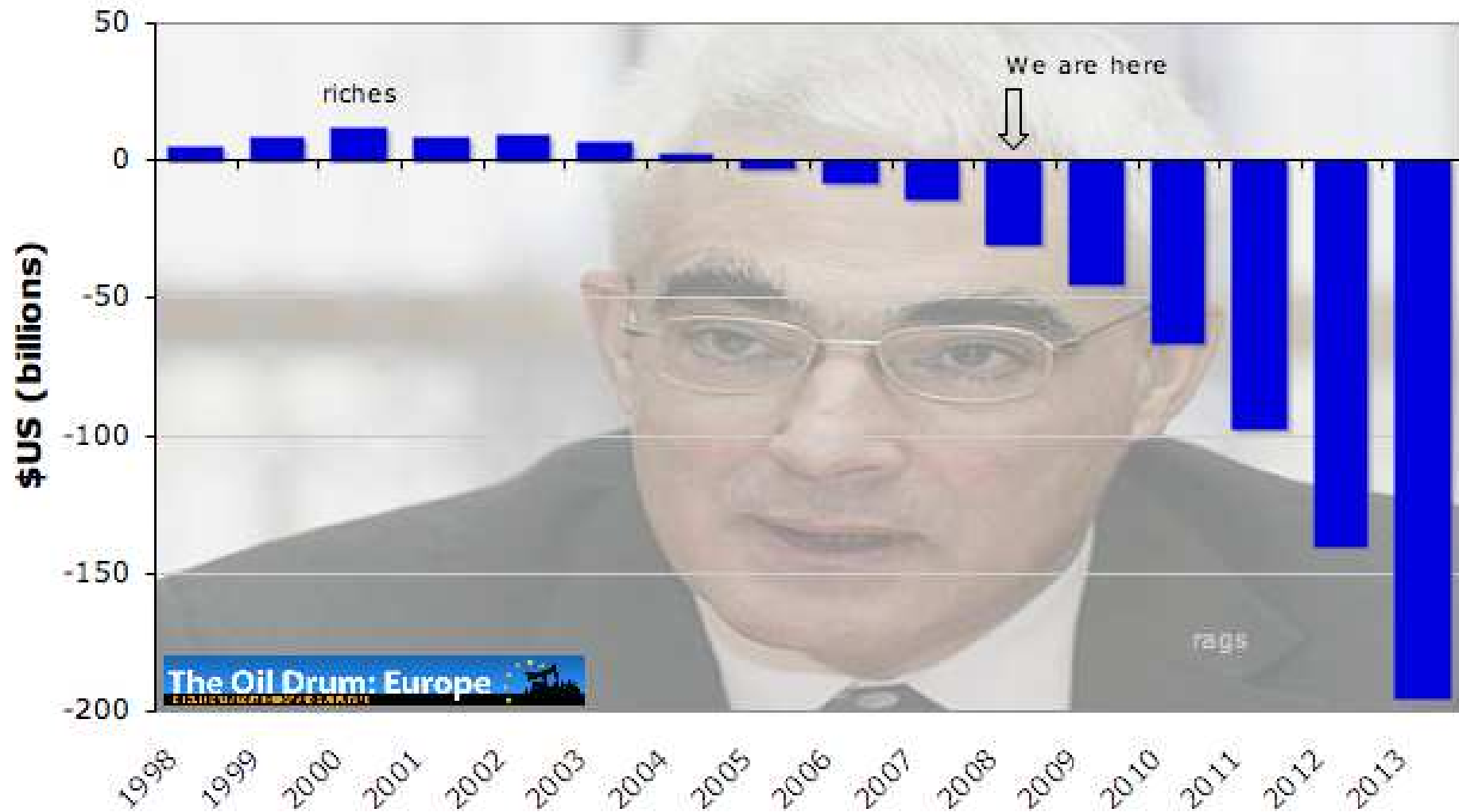


The Oil Drum
Chris Vernon

UK primary energy production and forecast scenario



Riches to rags: UK oil and gas surplus turns to crippling deficit



The
Economist

SEPTEMBER 27th 2008

www.economist.com

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F # @ * !



In brief

- There is no simple 'techno fix'
- There are many alternative energy options, but each has its limits and all will require significant time and major investment
- *Depletion means that we must plan for a future of less energy*

The big issues

1. Energy depletion (Peak Oil)

Global peak oil production probably last year.

2. Climate change

“Slowing and reversing these threats (climate change as outlined by the IPCC) is the defining challenge of our age” – Ban Ki-Moon, Secretary General of the United Nations, 17th Nov 2007

“Delaying action for decades, or even just years, is not a serious option.” – Sir David King, then UK Government Chief Scientific Adviser, writing in *Science*, 9 January 2004 (over six years ago now)

“We have already passed the stage of dangerous climate change. The task now is to avoid catastrophic climate change.” - Professor John P. Holdren, Chairman of the American Association for the Advancement of Science, Aug 2006

“If there’s no action before 2012, that’s too late. What we do in the next two to three years will determine our future. This is the defining moment.” - Rajendra Pachauri, the scientist and economist who heads the IPCC, 17th Nov 2007

The big issues

1. Energy depletion (Peak Oil)

Global peak oil production probably last year.

2. Climate change

Politics massively out of step with science



The 'Supply Side Dilemma'

The climate change imperative suggests we should ban all fossil fuel extraction today (i.e. further limit supply)

BUT

We are totally dependent on fossil fuels and doing this would cause unacceptable suffering

So there is a tension, or tightrope, between addressing climate change and addressing peak oil.

Renewables help, but...

One thing that helps on all fronts

Reduce demand



What is needed?

“Large-scale problems require large-scale solutions”

?

What is needed?

"Large-scale problems do not require large-scale solutions; they require small-scale solutions within a large-scale framework."

What is needed?

International Level – Binding agreement
on national carbon/energy budgets

National Level – Implementation
TEQs (www.teqs.net)

Local Level – Transition
Towns/Eigg/Monteveglio/...

Personal Level – Us

What is needed?

Personal Level – Us

**Local Level – Transition
Towns/Eigg/Monteveglio/...**

**National Level – Support
TEQs (www.teqs.net)**

**International Level – Collective
responsibility – COP16 Mexico??**

What is needed?

Personal Level – Us

Local Level – Transition
Towns/Eigg/Monteveglio/...

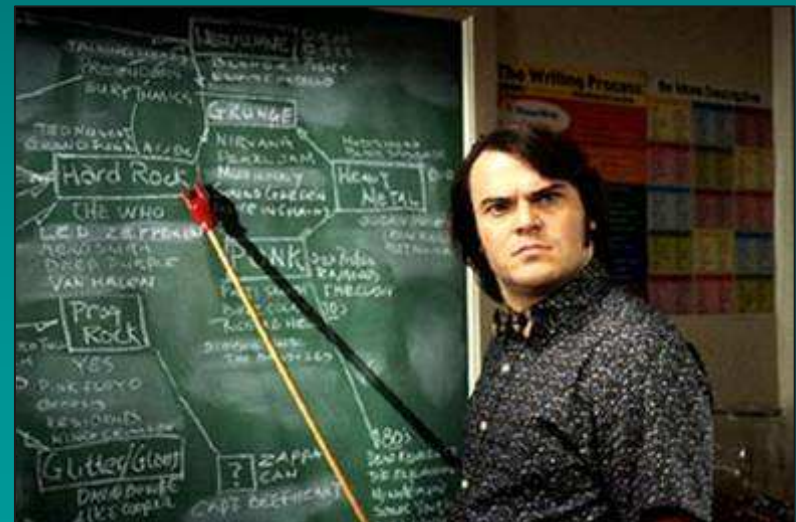
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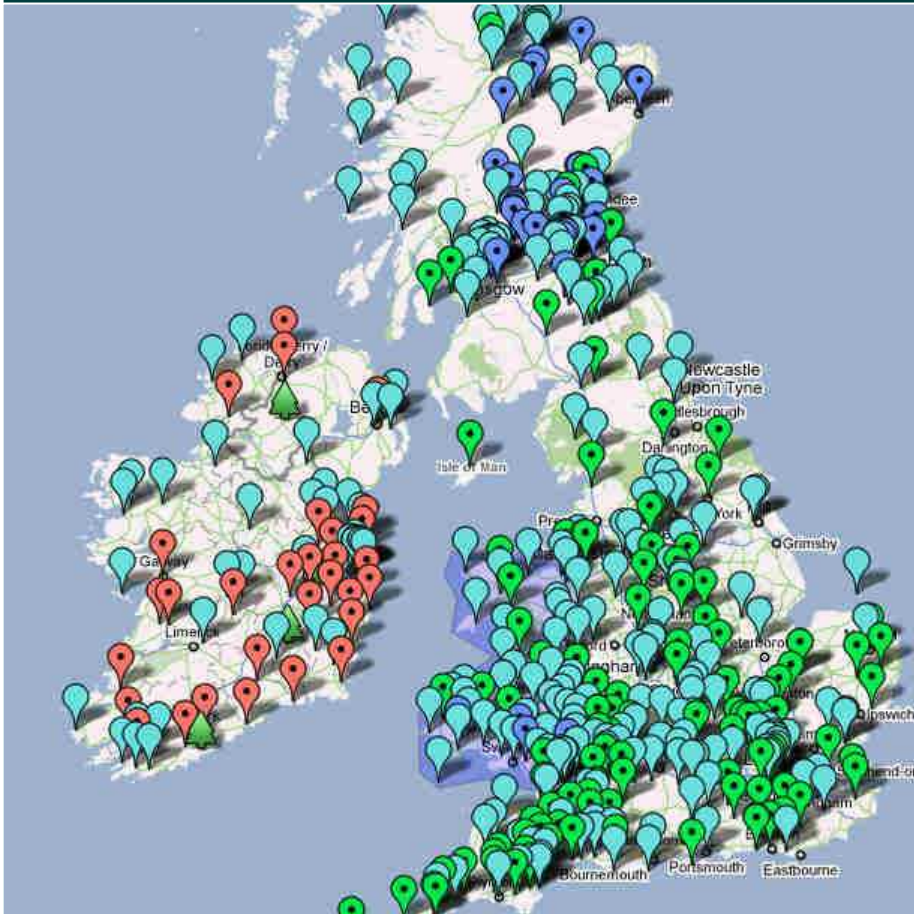
How are Transition initiatives organising?

Transition Approach

- Understanding:
 - PO + CC + £ ↓ ≠ “business as usual”
 - Adaptable, creative, positive and NOW!
- Transition Network
- 12 Steps



Who's designing a creative, positive energy descent?



Who's designing a creative, positive energy descent?



Who's designing a creative, positive energy descent?



Transition Model - Step 1

- Set up an initiating group and design its demise from the outset
 - humility
 - stages 2-5
 - reforms from subgroups



Transition Model - Step 2

- Awareness raising
 - allies and networks
 - prepare community
 - movies
 - talks
 - events



Transition Model - Step 3

- Lay the foundations
 - other groups
 - existing projects
 - official bodies
 - businesses



Transition Model - Step 4

- Organise a Great Unleashing
 - coming of age
 - powerful, passionate, informative, inspirational
 - making connections
 - don't rush it



Transition Model - Step 5

- Form “working groups”
 - starting new groups
 - bringing in existing groups
 - training
 - working groups and the steering group



Transition Model - Step 6

- Use “Open Space”
 - shouldn’t work!
 - World Café
 - Harrison Owen - Open Space Technology: A User’s Guide
 - Peggy Holman and Tom Devane’ - The Change Handbook: Group Methods for Shaping the Future



Transition Model - Step 7

- Develop visible practical manifestations of your project
 - not a talking shop
 - choose carefully
 - lure in fence-sitters
 - team building potential
 - getting dirt under your fingernails



Transition Model - Step 8

- Facilitate the Great Reskilling
 - The most useless generation ever!
 - repairing, cooking, fixing bikes, natural building, loft insulation, dyeing, herbal walks, gardening, basic home energy efficiency, making sour doughs, practical food growing (the list is endless...)



Transition Model - Step 9

- Build bridges to Local Government
 - becomes crucial
 - don't wait too long...
 - open door
 - Community Development Plan



Transition Model - Step 10

- Honour the Elders
 - elders as a community resource
 - 1930 to 1960 – moving from oil scarcity to abundance
 - oral history, community infrastructure
 - using their insights to move forward



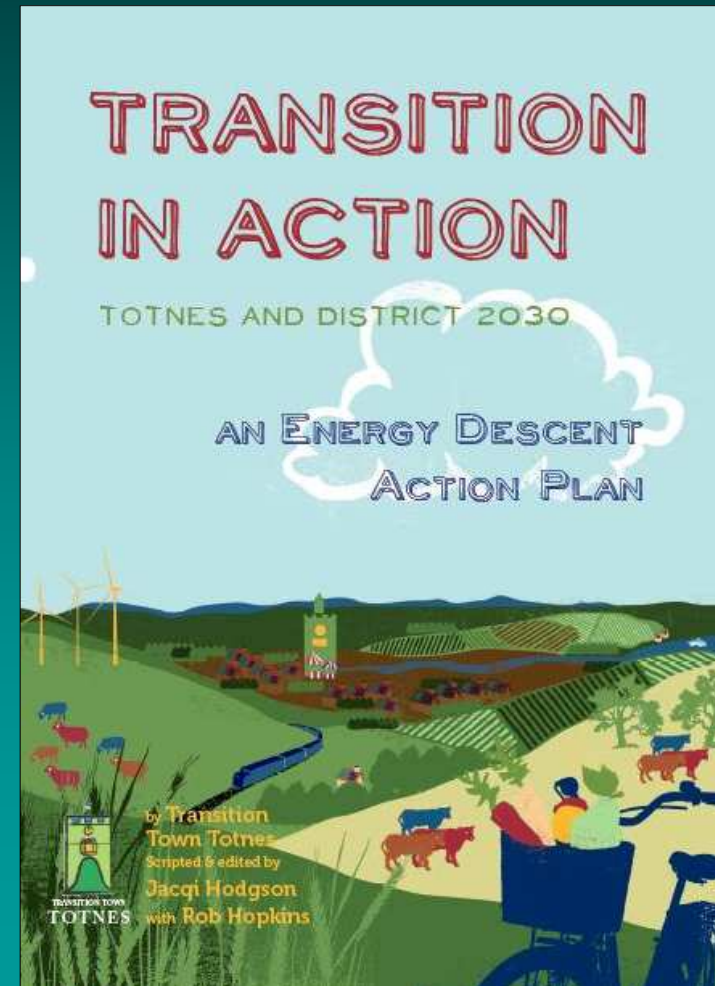
Transition Model - Step 11

- Let it go where it wants to go...
 - focus on the questions
 - unleash the community
 - any sense of control is illusory



Transition Model - Step 12

- Produce and start to implement the Energy Descent Action Plan
 - assess current situation
 - create 15-20 year vision for all key areas and 'backcast'
 - use Transition Timeline
 - integrate with community plan if possible
 - resilience indicators
 - start the work



What kind of things are they up to...?

- loads of awareness raising talks, movies, discussions
- skill sharing
- seed sharing
- local food directories
- local currencies
- oral history archives
- planting fruit trees
- starting up locally owned renewable energy companies
- garden share schemes
- energy saving advice for the community
- central buying of trees for “city orchards”
- mending courses
- loads of reskilling events, eg Dr Bike, composting toilets, reedbeds
- working with local schools
- cutting out plastic bags and holding workshops on how to make fabric ones out of scraps
- getting sustainability books into their libraries
- car share schemes
- community supported agriculture schemes
- guerilla gardening
- permaculture courses

What kind of things are they up to...? (UK)

Taken from the May/June 2010 Roundup - a trawl of websites and Google alerts from around the world

- Portobello, Scotland - short courses in vegetable growing and raised bed construction
- TT Brixton - Master Gardener training course
- TT Sevenoaks - including a seedling swap, advice on raising chickens and bees and a food hub
- New Forest Transition – a new Local Food Market
- Unleashings in Hebden Bridge, TT Malvern
- TT Totnes published the EDAP
- TT Finsbury in London – video workshops
- TT Halesworth – upcycling (mending) project
- Portobello – home water checks
- TT Berkhamstead's – car free day
- TT Horncastle – Nappucino event (skillshare re alternatives to “disposable” nappies)

What kind of things are they up to...? (Europe/US/Australasia)

Taken from the May/June 2010 Roundup - a trawl of websites and Google alerts from around the world

- New TT initiative started up in Witzenhausen, Germany
- Transition Hub starting in Brussels, Belgium
- New TT initiative started in Heidelberg west, Germany
- Unleashings in TT Carrboro-Chapel Hill and TT Whatcom in US
- T San Francisco mulling over a local currency – “bernalbucks”
- T Kurilpa and the Brisbane Transition Hub had David Holmgren (permaculture co-founder) at big awareness raising event
- US TV show called ‘Sustainable Today’ featured David Johnson and Jim Newcomer speaking about the transition in Portland, Oregon
- Transition Tasmania – ‘produce swap’ and no-knead bread skill share
- TT Blackwood in Oz – seed share event
- TT Invercargill, New Zealand were given a community garden



THE TRANSITION HANDBOOK

From oil dependency to local resilience



Rob Hopkins

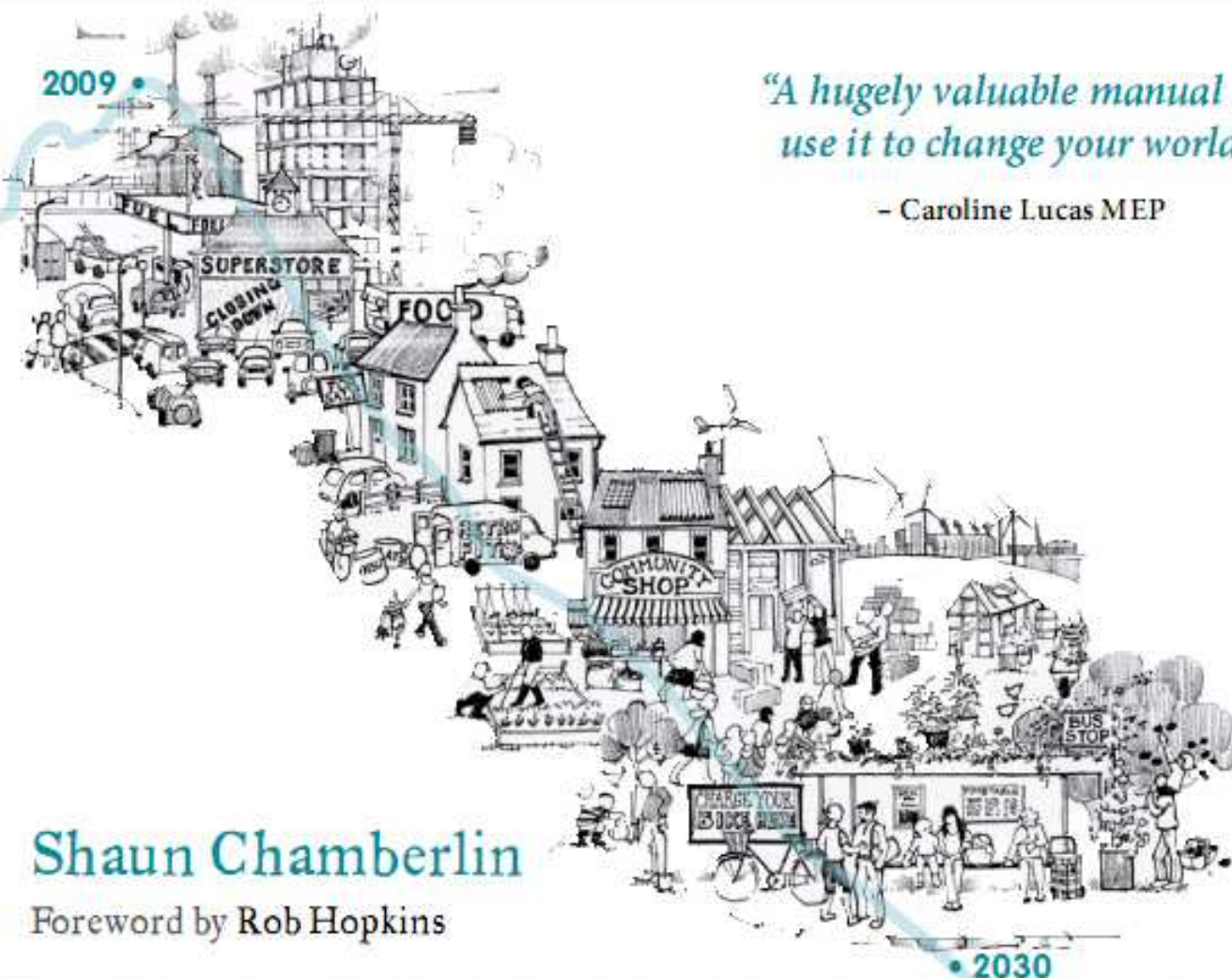
Founder of the Transition movement

"If your town is not yet a Transition Town, here is the guidance for making it one.
We have little time, and much to accomplish." — Richard Heinberg, author of *Peak Everything*

THE TRANSITION TIMELINE

for a local, resilient future

2009 •



*"A hugely valuable manual . . .
use it to change your world."*

– Caroline Lucas MEP

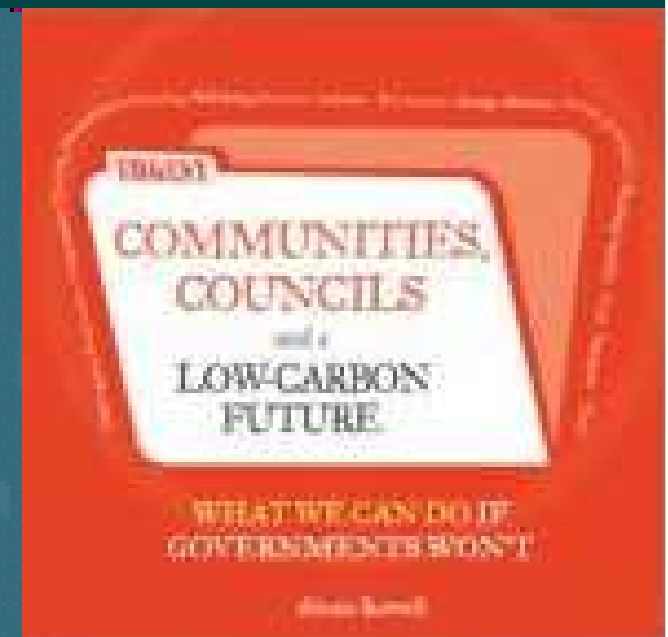
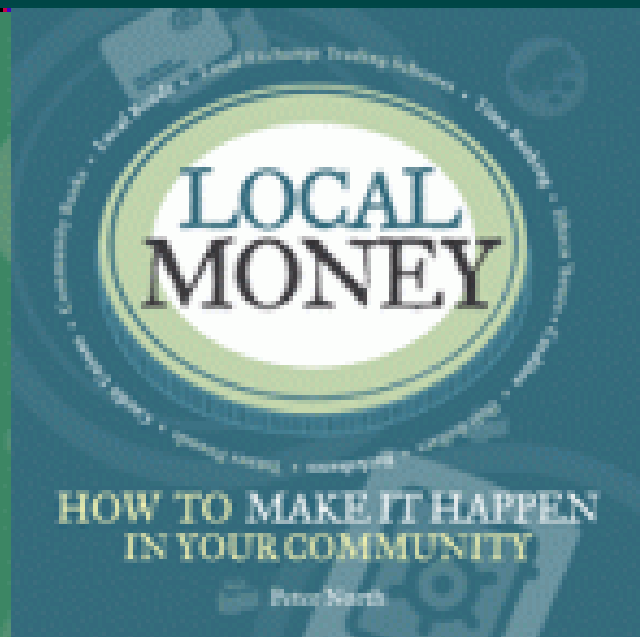
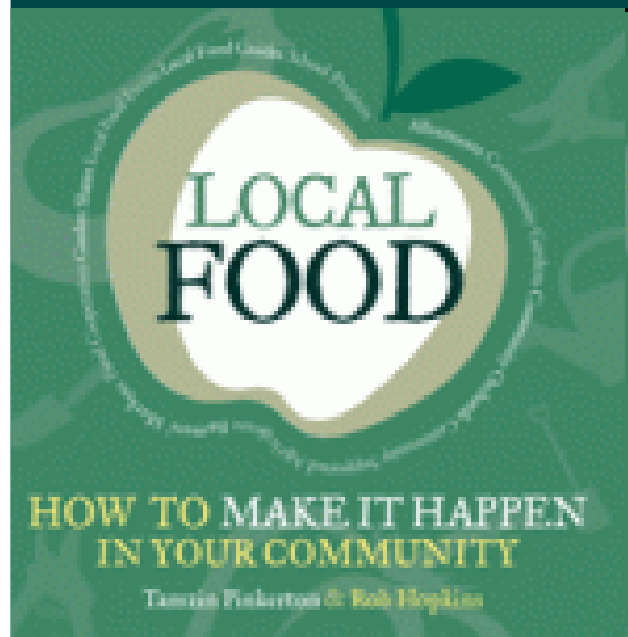
Shaun Chamberlin

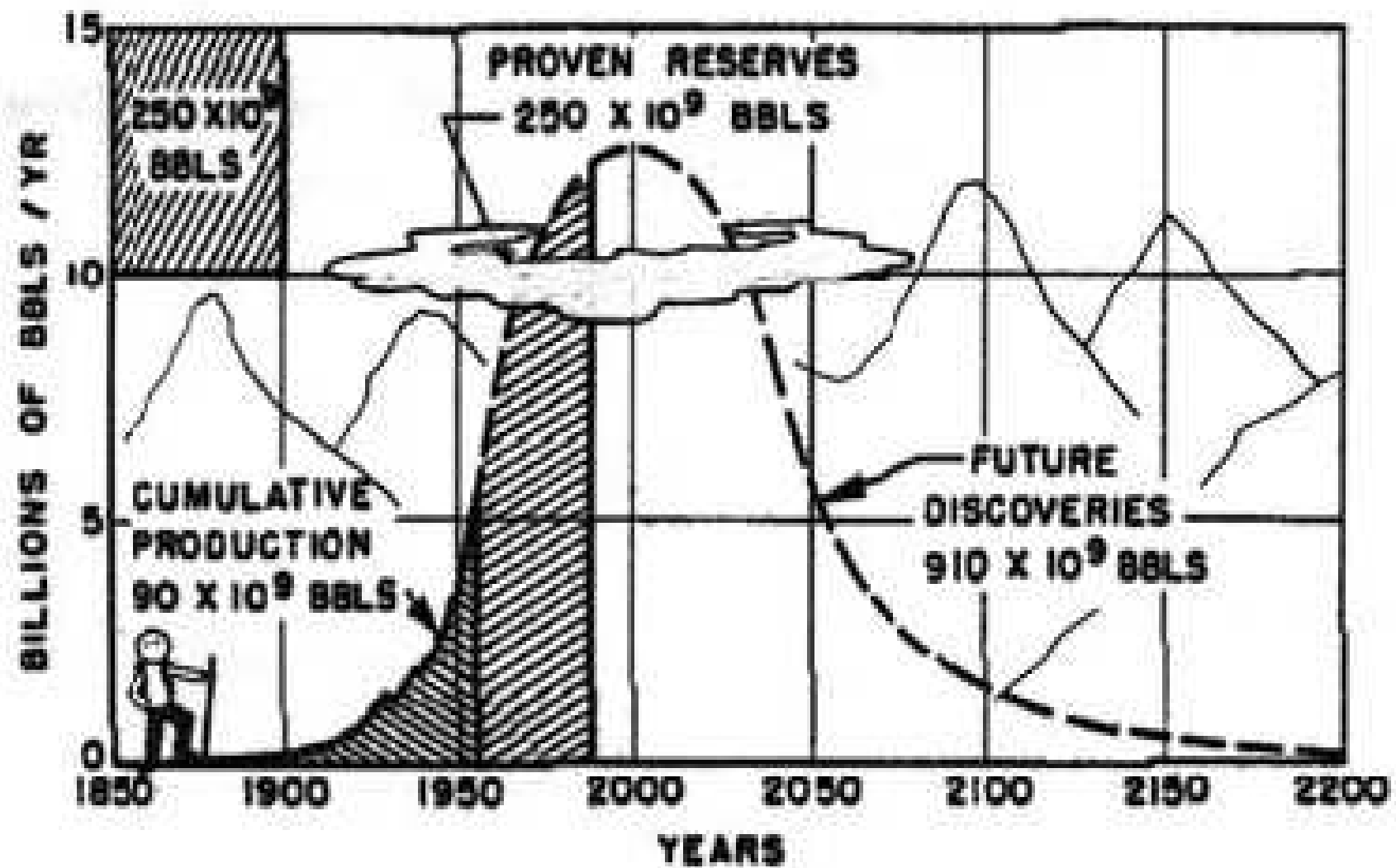
Foreword by Rob Hopkins

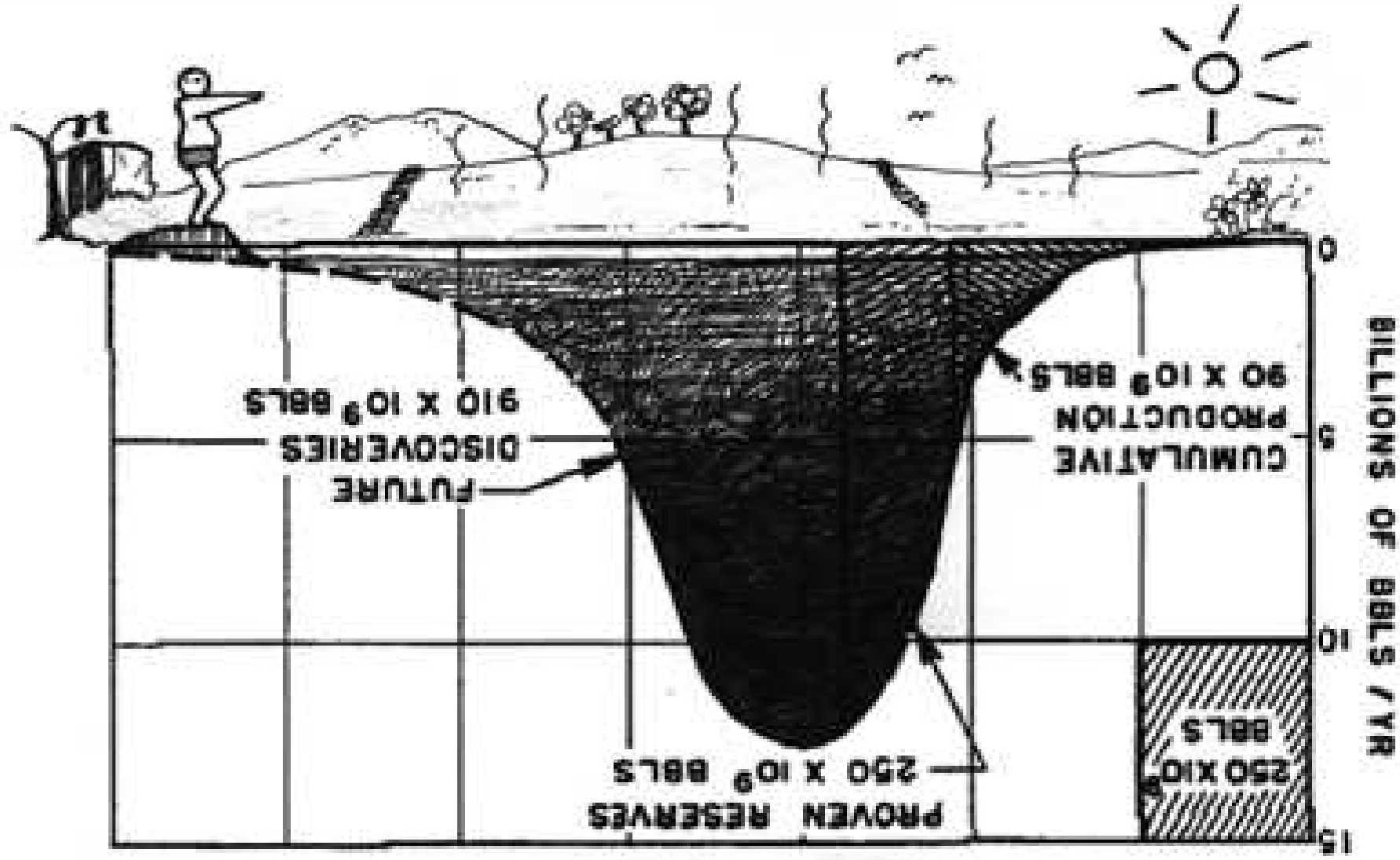
"The Transition Timeline provides an invaluable set of innovative approaches, new narratives and creative thinking tools that will prove vital in enabling us to shape a new kind of society. . . . It should be read by everyone, immediately!"

– Paul Allen, Director of the Centre for Alternative Technology, and project director of Zero Carbon Britain

Transition Guides







What is needed?

Personal Level – Us

**Local Level – Transition
Towns/Eigg/Monteveglio/...**

**National Level – Support
TEQs (www.teqs.net)**

**International Level – Collective
responsibility – COP16 Mexico??**



"To be truly radical is to make hope possible, rather than despair convincing." - Raymond Williams

BBC - "MPs back personal carbon credits"

by Shaun Chamberlin on June 13th, 2008



About

Dark Optimism is the not-for-profit public interest research work of Shaun Chamberlin, working with a wide network of friends and partners nationally and internationally.

We are unashamedly positive about what kind of a world humanity could create, and unashamedly realistic about how far we are

End of presentation

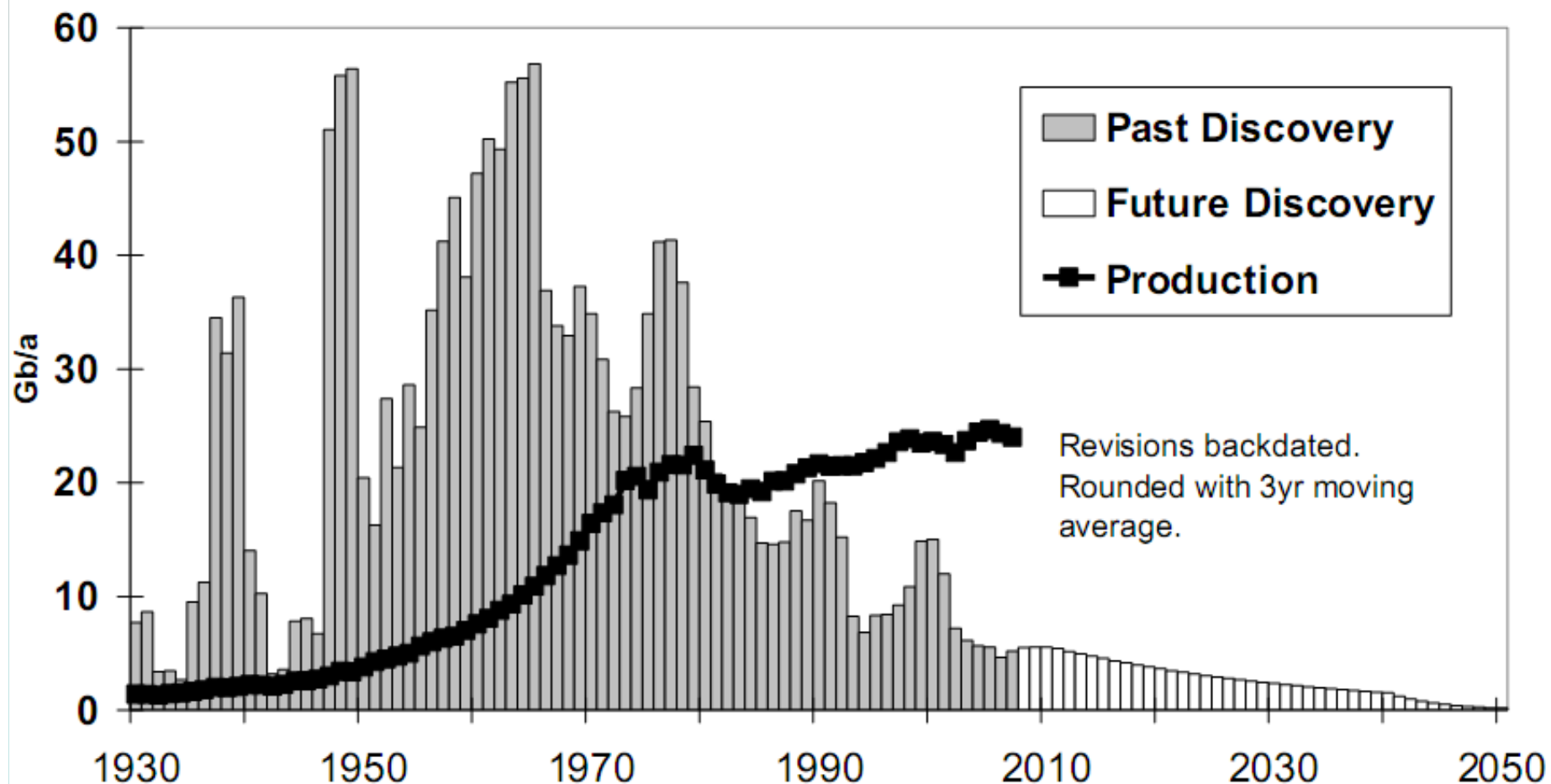
Supplementary slides follow

It's pretty amazing that our society has reached a point where the effort necessary to extract oil from the ground, ship it to a refinery, turn it into plastic, shape it appropriately, truck it to a store, buy it, and bring it home



is considered to be less effort than what it takes to just wash the spoon when you're done with it.

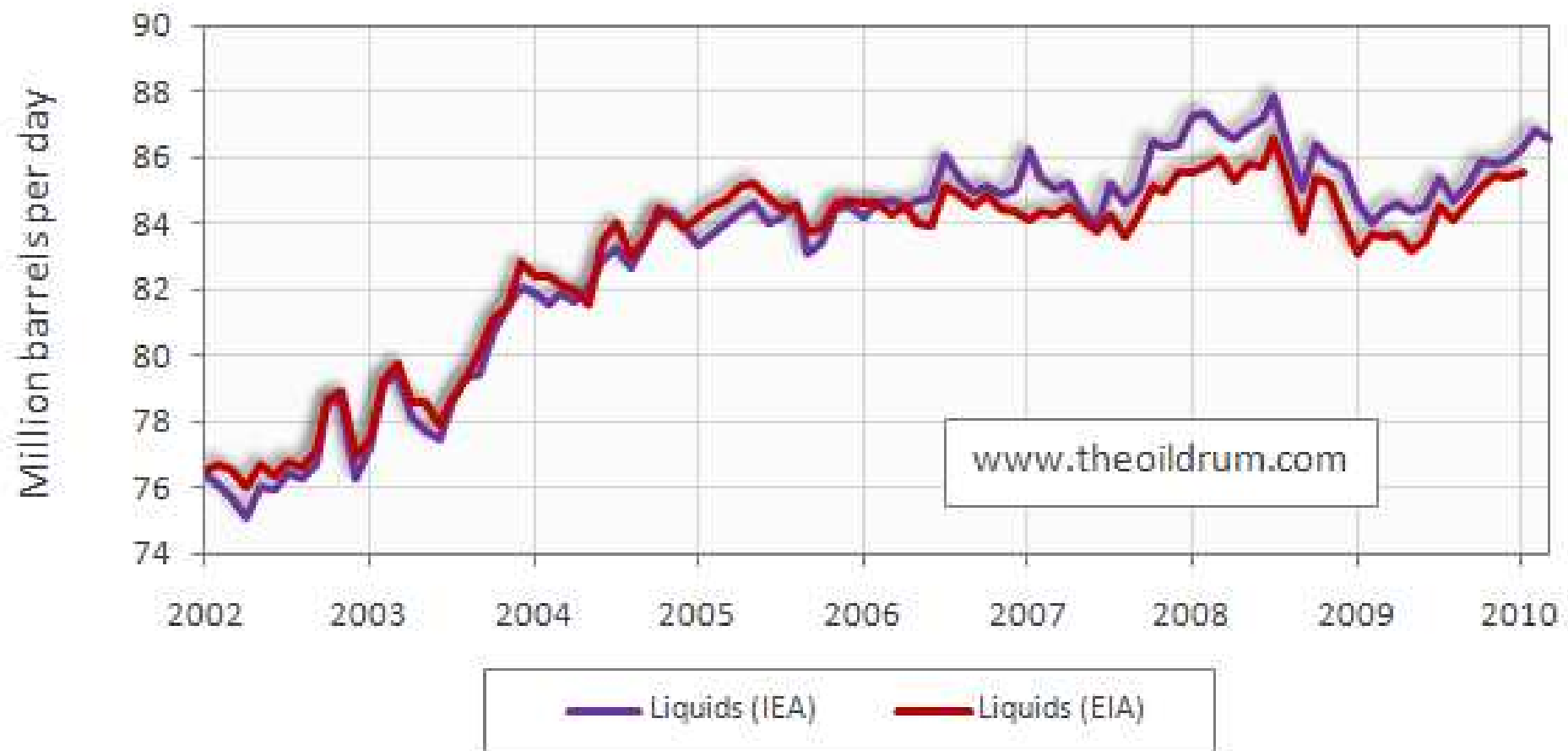
THE GROWING GAP Regular Conventional Oil



Global oil *discovery* peak: 1965

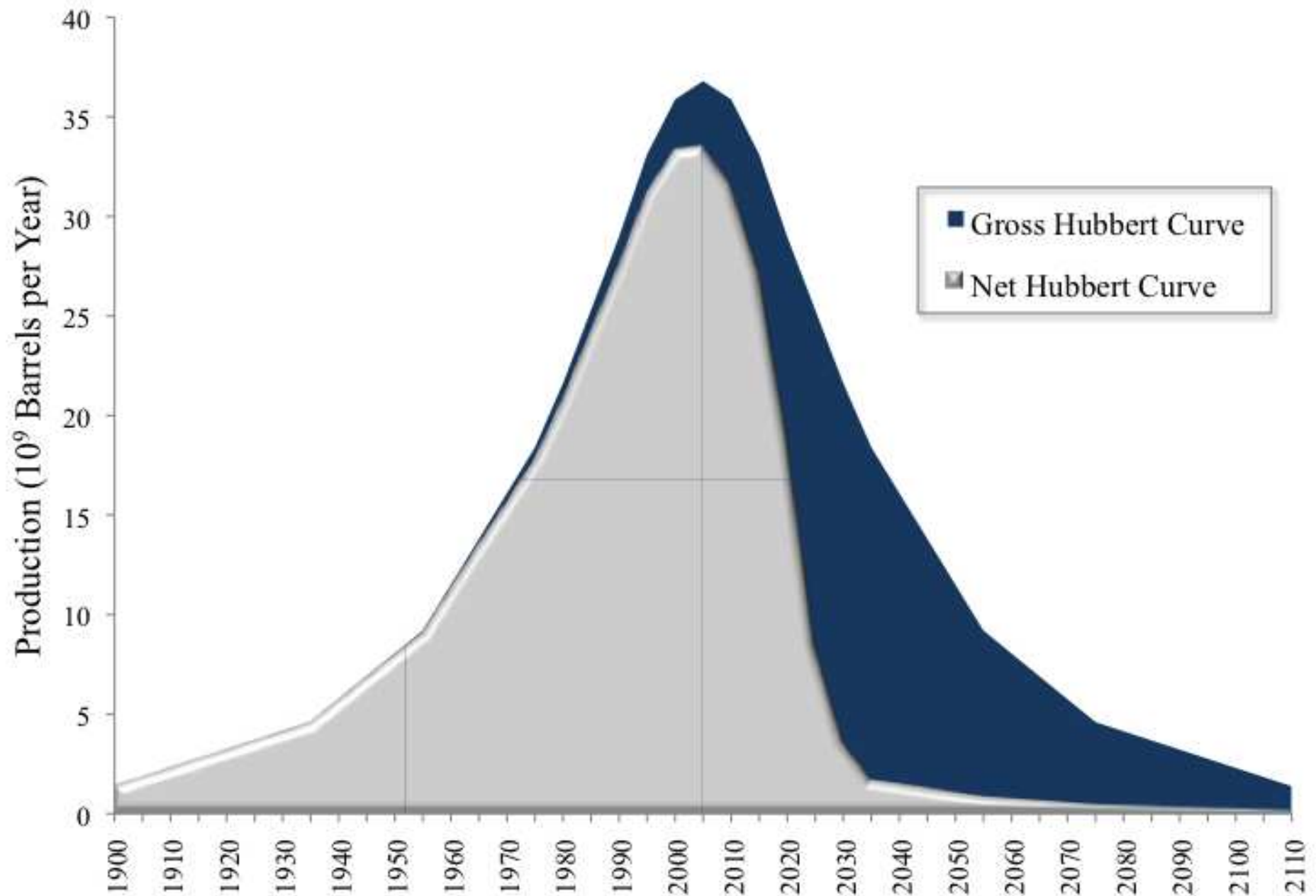
Source: Colin Campbell, ASPO,
based on ExxonMobil 2002

World Liquid Fuels Production



Data sources: International Energy Agency / U.S. Dept. of Energy (EIA)

Global oil *production* peak: 2008?



(by the time peak production is reached, 73% of the net energy available is already used)

Source: David Murphy – The Oil Drum. <http://tinyurl.com/l5gpch>

“The future is already here, it’s just unevenly distributed” ~ William Gibson

United Nations (2007, \$60/barrel)

“Recent oil price increases have had devastating effects on many of the world’s poor countries, some of which now spend as much as six times as much on fuel as they do on health. Others spend twice the money on fuel as they do on poverty alleviation. And in still others, the foreign exchange drain from higher oil prices is five times the gain from recent debt relief.

Of the 47 poorest countries in the world, 38 are net importers of oil, and 25 are fully dependent on imports.”

Three origins of The Transition Timeline

- 1) Providing a sense of the 'big picture' for UK Transition initiatives
- 2) Concerns about scale of challenges
- 3) Fleshing out the vision

Book overview

Second half – Latest evidence on climate change and peak oil, focusing on present and future UK impacts.

First half – Four different visions, focusing on the Transition Vision.

Also Rob chapter on tools for communities planning their local visions.





Why visions of the future matter

The Transition movement is very focused on peak oil and climate change, and with good reason

But what created these problems...?





Our collective choices, shaped by our understanding of the world and what is important to us

Different visions of our future

	Ignoring evidence	Acknowledging challenges
Business As Usual (BAU)	<p>1 Denial</p> 	<p>2 Hitting The Wall</p> 
Cultural shift	<p>3 The Impossible Dream</p> 	<p>4 The Transition Vision</p> 







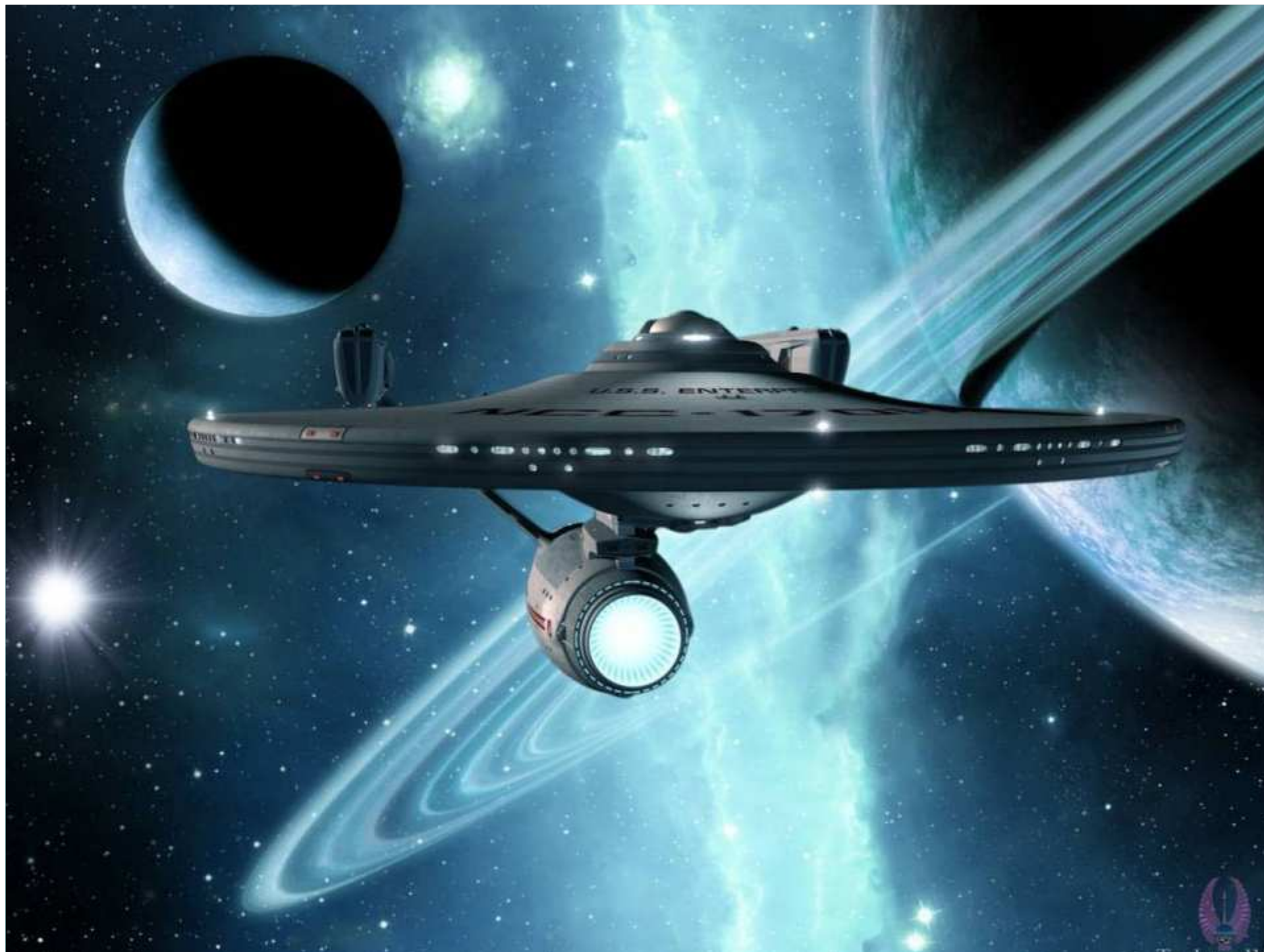
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Different visions of our future

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The Transition Vision

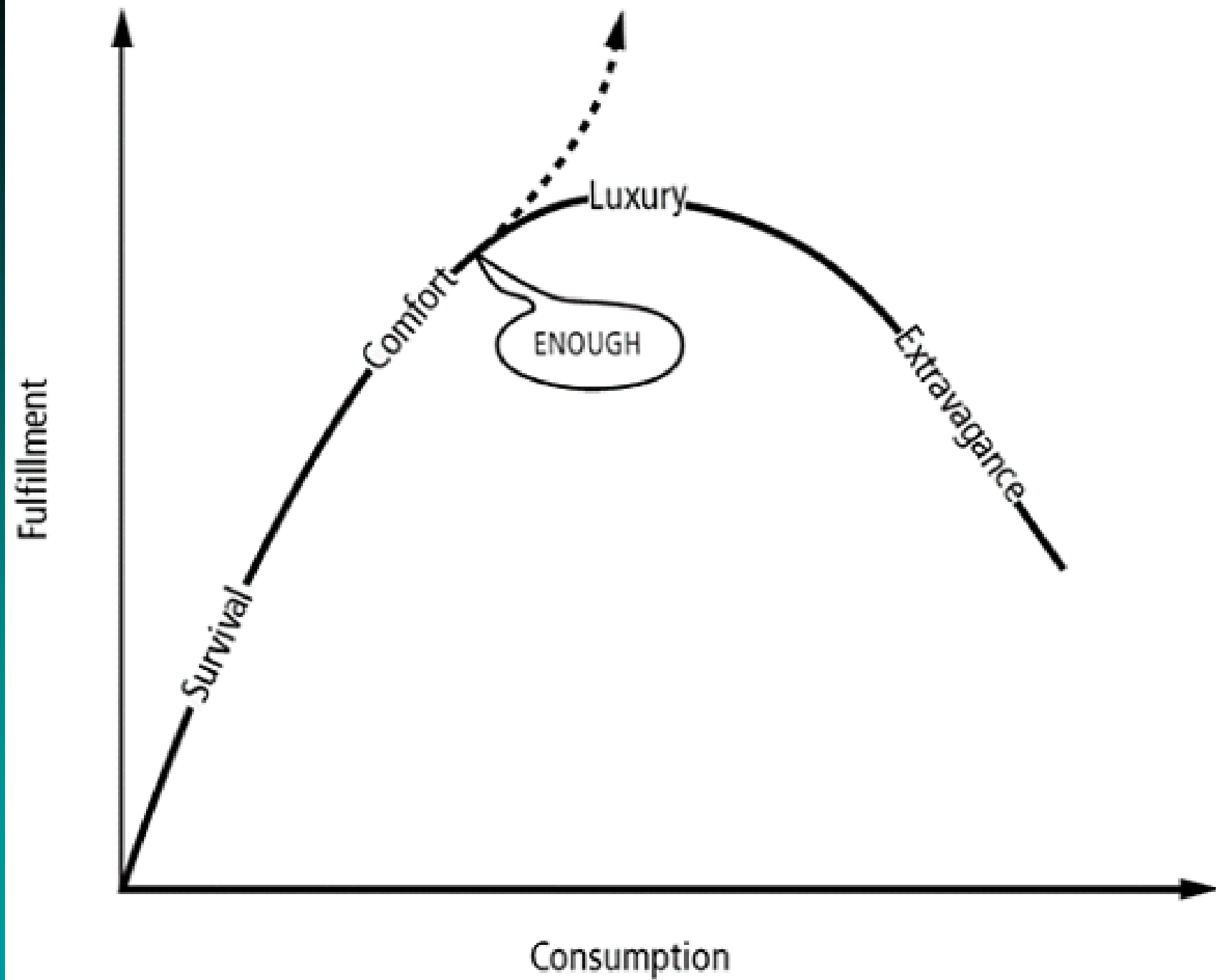


In our future, we create a resilient, more localised society which avoids the worst potential of climate change and peak oil through building thriving lower-energy communities teeming with satisfying lifestyles and fulfilled people.



Examines in depth:

- Food and water
(current trends, cultural story change, Vision)
- Population and demographics
 - Electricity and energy
 - Travel and transport
 - Health and medicine
- Systems thinking - pulling these threads together



“We act as though comfort and luxury were the chief requirements of life, when all that we need to make us really happy is something to be enthusiastic about.”

– Charles Kingsley

So how do we help make it happen?

- 1) Know the reality of our times
- 2) Know and recognise the dominant stories
- 3) Flesh out alternative stories (explanatory and predictive) and build compelling visions of our future, globally and locally
- 4) Plan out making those visions a reality
- 5) ...

“Once you have glimpsed the world as it might be, as it ought to be, as it’s going to be (however that vision appears to you), it is impossible to live compliant and complacent anymore in the world as it is”

- Victoria Safford

Bringing our visions to life

So let's make our visions fit the world we live in,
and make them happen

A key tool: ***Backcasting***

And another: **Resilience indicators** – what might
these be for Lancaster?

Totnes EDAP resilience characteristics

- Leadership diversified and representative of age, gender and cultural composition of the community
- Organisations in the community have developed partnerships and collaborative working relationships
- Diversified employment
- Many locally owned businesses
- Regular evaluation of progress toward community's strategic goals

Transition Timeline sample resilience indicators

- Percentage of new buildings which meet Passive House standards
- Percentage of food consumed in the area that was produced within given radius
- Number of people who feel they have certain skills
- Percentage of households without a car
- Ratio of car parking space to productive land

'Transition in Action' is the UK's first comprehensive Energy Descent Action Plan designed for and by a local community. It sees the changes necessitated by climate change, peak oil and the UK's debt crisis not as a crisis, but as a huge opportunity for entrepreneurship, creativity, community, enhanced resilience and a greater quality of life. In these pages you will find not just a vision of a more resilient world, but practical steps to reach it, key research, inspired ideas and a glimpse into the town's recent past and what we can learn from it.

In September 2006, the Devon market town of Totnes began a journey to design and implement its move away from fossil fuel dependency and towards a lower carbon, less energy dependent, more localised and nourishing future, building on the town's long history of 'green' living. The approach it has developed has since inspired thousands of other communities around the world to do the same, bringing much attention to the town. Over 500 local people have contributed to and shaped this Plan. The result, which you now hold in your hands, is an extraordinary vision and statement of community intent, not just setting out what is possible, but also what is already underway to bring it into being.

"There's a great awakening going on today, driven by accelerating climate change and by the era of cheap oil coming to an end. Very few communities are as yet properly prepared for such changes, but this Action Plan for Totnes demonstrates exactly what can now be done - and how all of us can get involved." Jonathan Porritt
CEO-FOUNDER OF VISION FOR THE FUTURE AND FORMER CHAIRMAN OF THE UK SUSTAINABLE DEVELOPMENT COMMISSION. IS AN ENVIRONMENTAL WRITER, BROADCASTER AND CONTRIBUTOR TO THE LANCET AND THE GUARDIAN.

"By planning for a world in which fossil fuels are no longer cheap and abundant, Totnes has set an example that every town and city in the world should follow. The post-carbon transition can be a creative opportunity for societal renewal, but only if we plan for it. And given the realities of climate change and oil depletion, we are all starting very late in the game. Kudos to this brave community for stepping up to the challenge and producing a thorough, far-sighted document." Richard Heinberg
Senior Fellow at the Post Carbon Institute and author of THE PACE OF CHANGE AND THE END OF OIL.

"The Energy Descent Action plan is a solid piece of work that tells you how to assess what resources a community has - we're talking skills, ecology, potential for food production, social and creative resources - and clearly sets out ways to utilise them properly. It should give millions of us direction - and critically the confidence - to believe that a sustainable life is within our grasp." Lucy Siegle
HAS WRITTEN A WIDE RANGE OF BOOKS FOR THE GUARDIAN AND THE NEW YORK TIMES AND IS THE AUTHOR OF A NEW NOVEL IN THE URBAN JUNGLE AND NO CLOWN.

"Totnes is fortunate to have so many people who care about their community, who have strong views about how it should develop and what the priorities should be. Naturally there are a range of views but this can only be healthy for democracy. South Hams District Council welcomes all views but is particularly grateful to Transition Town Totnes for putting so much thought and effort into producing the Energy Descent Action Plan. It sees this as an important document in stimulating both debate and consideration as to what all those involved in the life of the town can do to make Totnes an even better place to live, work or visit." David Inceall
COUNCIL MANAGER, SOUTH HAMS DISTRICT COUNCIL.



TRANSITION IN ACTION
AN ENERGY DESCENT ACTION PLAN
TOTNES AND DISTRICT 2030

by Transition Town Totnes
Jacqui Hodgson with Rob Hopkins



TRANSITION IN ACTION

TOTNES AND DISTRICT 2030

AN ENERGY DESCENT
ACTION PLAN

by Transition
Town Totnes
Scripted & edited by
Jacqui Hodgson
with Rob Hopkins



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www.totnesedap.org.uk

Monteveglia Council, Italy

- Oil and fossil fuel depletion is this administration's priority, to be implemented through an Energy Descent Plan to turn Monteveglia into a "Post Carbon" City.
- Strategic partnership with the Association Monteveglia Città di Transizione [Transition City Monteveglia] with whom this administration shares:
 - a view of the future (the depletion of energy resources and the significance of a limit to economic development)
 - methods (bottom-up community participation)
 - objectives (to make our community more resilient, i.e. better prepared to face a low energy future)
 - an optimistic approach (although the times are hard, changes to come will include great opportunities to improve the whole community's quality of life).
- Define CO₂ emission measurement tools and containment policies well beyond EU targets and in line with the global objective of 350 ppm.
- Promote energy efficiency of public buildings, by upgrading existing structures through external insulation and other projects, installing photovoltaic and solar panels, and setting high energy efficiency targets for all new buildings.
- To endorse reforestation actions in the area, as a means of compensating CO₂ emissions.
- To inform the community on the limits of a concept of development based on unlimited resources, on the need to reconvert an economy based on the massive use of fossil fuels and other non-renewable resources and on the benefits of a more frugal and sustainable lifestyle.