



Caithness Conference Beyond Dounreay



Caithness Regeneration Partnership

John Farquhar
Nuclear Decommissioning Authority





Developing and Attracting New Business

Stuart Black
Highlands and Islands Enterprise



Developing and Attracting New Business

- Key themes
 - What are the strengths, weaknesses, opportunities and threats
 - What has been achieved
 - What can we do
 - What should be done now

Developing and Attracting New Business

Actions

- Market the area as “Open for Business”
 - General
 - Targeted
- Seek commitment to investment in infrastructure
- Action plan agreed and prioritised
- Avoid fragmentation – BE UNITED

Business Incubation and North Highland Regeneration Fund

Neil Robertson
New Park



Business Incubation / North Highland Regeneration Fund



- One of the UK's leading private sector developers of Science and Technology Parks.
- 5 technology centres across Scotland.
- Locally, acquired the Forss site next to Dounreay, with £6 million invested so far in it's re-development.
- Working on other new projects in Caithness.

Business Incubation / North Highland Regeneration Fund



- Forss Business & Technology Park
 - Creating the right infrastructure for development.
 - Key players in the energy sector & growing technology areas.
 - Home to the 'Innovation Forss' business incubation project.
 - The North Highland Regeneration Fund is run from here.

Business Incubation / North Highland Regeneration Fund



- Technology Incubation Project:
 - Forss Innovation Centre (FIC)
 - Innovation & business support
 - Stimulating Inward investment



Business Incubation / North Highland Regeneration Fund



- Strategic objectives:
 - Assist with Company Creation in Growth Sectors
 - Encourage R&D Activity
 - Develop a Culture of Creativity, Innovation and Entrepreneurship



Business Incubation / North Highland Regeneration Fund



- Targets:
 - First year: 5 companies on board, at least 1 inward investment.
 - To have a full range of incubation support services in place



Business Incubation / North Highland Regeneration Fund

- The North Highland Regeneration Fund provides pump-priming money to new ventures and existing organisations aimed at bringing to realisation entrepreneurial ideas leading to job creation.



Business Incubation / North Highland Regeneration Fund

- The Fund offers support by way of loan.
- Grants are not available from the Fund, and it does not offer financial support in any other way.
- The Fund does not invest in companies by subscribing for shares and will not pay for a “stake” in a business.



NHRF Geographical coverage



Business Incubation / North Highland Regeneration Fund

The loans.

- *Minimum loan: £5000.*
- *Maximum loan: £50,000.*
- *Period: repayable over 60 months.*
- *Bank of England base rate plus 1%*
- *Unsecured.*



NHRF Geographical coverage



Business Incubation / North Highland Regeneration Fund

Key Facts:

- *Fund launched Oct. 2006.*
- *£326,000 committed to loans .*
- *Average loan £40,750.*
- *8 companies successful so far.*
- *Interaction with 40 companies.*
- *47 secured jobs, 38 new jobs.*



Business Incubation / North Highland Regeneration Fund

Key Facts:

- *Sectors: tourism, engineering, biomass fuels, marine renewable energy, publishing, transport/distribution.*
- *A further potential 9 secured jobs in the pipeline and a further 38 new jobs.*



Education, Research and Development

Rosemary Thompson
North Highland College



Education, Research and Development

- Key themes
 - Centres of excellence linked to the local science base
 - University of the Highlands & Islands
 - Caithness base for Nuclear Skills Academy Scotland
 - Local skills base
 - Skills infrastructure

Education, Research and Development

- Focus on Youth, essential to retain and grow population - Scotland's Skills Strategy and National Skills Academy provides Step Change Opportunity
- Emphasis on Core Skills. Expand Schools Programmes, Enhance and extend Apprenticeships and increase Graduate Placement Opportunities

Education, Research and Development

- Major opportunity to develop Energy Centre for UK, “School of Energy”
- Existing R&D base must be expanded to foster SME development
- Ambitious training programme required to support Tourism (NHI North Highland Initiative)
- Agreed ACTION – Group will shortly reconvene to plan and assign tasks necessary to achieve progress

Education, Skills & R&D

A Small Business Perspective

Prof Iain Baikie
CEO KP Technology Ltd



KP Technology Ltd



- Set-up to exploit 25 years Research and Teaching Experience
- High Tech Materials and Instrumentation Sectors
- Start up 2002
- Seed funding: Own, CASE
- Based in Wick
- 3000 sq feet of Office Space
- 10 Employees mostly Graduates
- Award Winners:
 - SMART (2 Patents Pending)
 - Scottish Council for Development and Industry



Kelvin Probe Technology



Manufacturing of 'Kelvin' probe Systems

- Ship to 26 countries
- Own R&D (Instrumentation and Nanotechnology)



Consult for 250 (High-Tech) Companies

- ICI, Toshiba, Ford, Duport, Bosch, Epson, Tata Steel, Honeywell, Osram, CDT, PL

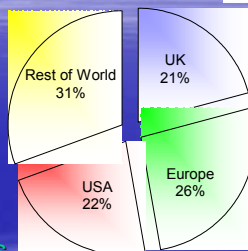


KP Technology Growth



Worldwide Sales Distribution

- 79% of Sales outside UK
- 55% Industry, 45% University
- 2002-2005 Internet based



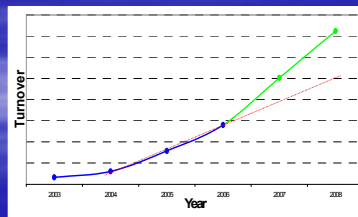
Sales Growth 2006 on:

- Attend International Conferences
- Better marketing materials
- Agents located world-wide



Lucky:

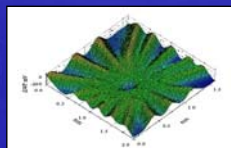
- Polymer Semiconductors
- Corrosion Research



Applications, Collaboration

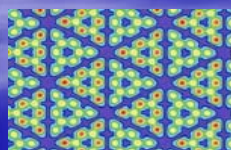


- Energy: Solar Cells, Fuel Cells, U, Pu
- Semiconductors
- Corrosion, Bio-technology
- Basic Research



External Research Relationships:

- European Space Agency
- Harvard Medical School
- Technion Univ.
- Energy Research Centre of the Netherlands



Why?

- Because the Kelvin probe can 'see' a layer 1 atom thick

Education, Skills and R&D



Key Ingredients in the success of KP Technology

- CASE Graduate Placement Scheme, 6 Graduates
- Physics, Computer Science, Business, Management
- Employees Diligent, Extremely Competent, Aspirational
- High Quality Jobs, wide range of activities
- Confidence- make the conditions fertile



Internal Training

- Workforce Development Plan (3yrs)
- On the job discovery
- Visits, Conferences, Meet Clients



Education, Skills and R&D



Train pupils and undergraduates

- Host WHS, THS projects under Nuffield
- Undergraduate Placements HWU, St. Andrews, Strath.
- Postgraduate Assistance (World-wide)
- About 10 workshops per year School, Community events
- Organise the Caithness International Science Festival



Train Clients/Agents

- ICI, Southampton Univ, Korea, Australia
- 100% success rate for clients who come to Wick
- Activities generate 250 nights accommodation per year



Caithness International Science Festival



Assist with Organisation, Logistics and Presentations

- 6th year, 3500 event places, 26 schools
- Primary, Secondary, SEN, General Public

Presenters 2007

- Duane Carey (Space Shuttle Pilot)
- Laura Nichols (MIT, Media Lab.)
- K'nex Technology Workshop
- Electronics, Geology, Scratch
- Drama 'NoiseWorks' Show



Fantastic Event for Caithness

- Without the contribution of many people here today- no festival

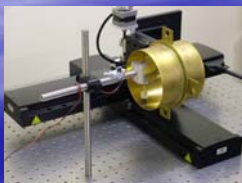


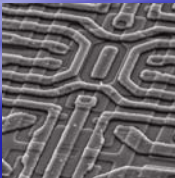
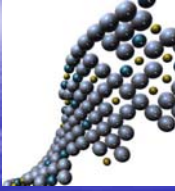
Education, Skills and R&D



'Our' R&D for next 2 years

- Expand Production Space
- Market the Worlds' Largest Scanning Kelvin probe
- Extend range of Kelvin Probe Products
- Push into complementary technologies
- Utilise SPUR to achieve specific goals
- Target expansion in China and USA (sales office)





Caithness Networking R&D



Caithness Natural Resources

- Wind Energy
- Tidal Energy

KP Technology Proposals

- Renewable Energy Demonstrator (Domestic)
1kW Wind +Solar, Fuel Cell, Li-ion Storage
 μ -processor control, wireless reporting
- Flow mapping of tidal current over 2 years

Caithness (Personnel) Resources

- Most of the Capabilities already exist
- Attract new talent
- Seize the opportunity!

Conclusion

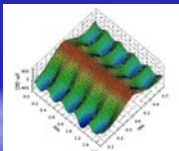
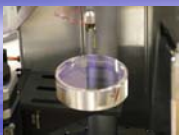


My SME Experience

- Our Location is not adverse to a start-up
- High Quality Talent is either here or can be attracted
- Everyone in my organisation is goal driven
- We aim to be the best in the world at what we do

Looking Forward (Caithness Partnership)

- Issue a Call for Specific Projects:
Demonstrator Form or
Commercial in 2-3 years
- Consider funding assistance
- Use Networking to achieve results
- We will recruit talent!



Building on Dounreay and its Current Skills

Simon Middlemas
UKAEA, Dounreay



Building on Dounreay and its Current Skills

- Key themes
 - Spin-out business from Dounreay site
 - Anchoring in Caithness of Dounreay contractors
 - Opportunities from wider UKAEA contracts for the area
 - Opportunities to locate NDA shared services in the area
 - Skills of Dounreay-dependent workforce

Building on Dounreay and its Current Skills

- Short term (3 years)
 - Dounreay LTP – site funding
 - Spin offs, shared services
 - Caithness Programme – inverse of Dounreay LTP
 - Skills academy – beyond nuclear
 - Decommissioning centre of excellence
 - Local consortium – capital builds, eg. Ports
- Medium to long term – opportunities?
 - What are they?
 - Mega project – aim, scope, plan
 - Private/government support
 - More detailed local socio-economic programme
 - Resource requirement

Attracting Public Sector Employment

Alistair Dodds
Highland Council



Attracting Public Sector Employment

- Key themes
 - Targeted marketing at specific departments and organisations
 - Provision of advance office accommodation
 - Partnership working to identify opportunities
 - Jobs dispersal
 - Area profile for marketing purposes

Attracting Public Sector Employment

- Developing new public sector and third sector jobs
 - New jobs, shared services, relocations
 - Government initiatives, eg, broadcasting
 - Westminster City Council (Dingwall)
 - Skills (schools, college and Dounreay)
 - Not just big numbers
 - Accommodation for jobs
 - Don't wait for Dounreay

Attracting Public Sector Employment

- Infrastructure and Associated Marketing
 - Hospital, schools, housing, transport, IT, culture & sports, natural environment
 - Generation of employment
- Partnerships
 - HIE, NDA, Council, UK & Scottish Government
 - Private Sector

Energy Opportunities

John Farquhar
Nuclear Decommissioning Authority



Energy Opportunities

- Key themes
 - Caithness recognised as a research base for energy development
 - Opportunities for energy industry in the area
 - Potential for the area to be a demonstration base for renewables
 - Business opportunities from local resource base

Energy Opportunities

- Energy Categories
 - Oil & Gas
 - Nuclear
 - Marine Renewables
 - Other Renewables
- Energy Cycle
 - Production
 - Transmission/Storage
 - Consumption

Energy Opportunities

- Energy Conference
- Strategy-Action Plan-Govt Support
- Infrastructure
- Links: new business, skills/R&D, growing indigenous business

Marine Energy Potential

Stuart Gibb
Environmental Research Institute



How inappropriate to call this planet Earth when it is clearly Ocean (Arthur C. Clark)

- Oceans cover 2/3 of the planet –more energy than could be used
- Oceans offer huge energy generation potential
- Land based renewable energies face constraints
- Marine energy = key to meeting renewables targets
- More costly & harder to access

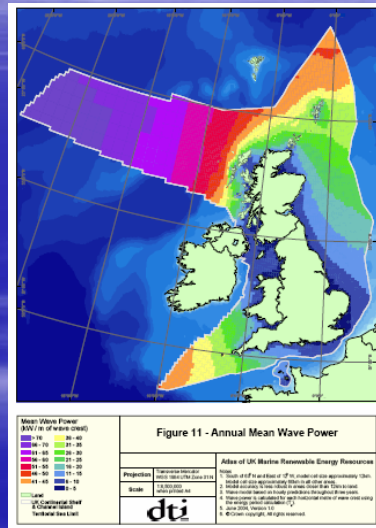
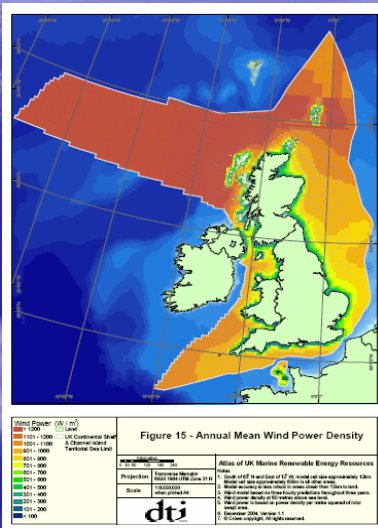


Types of marine energy

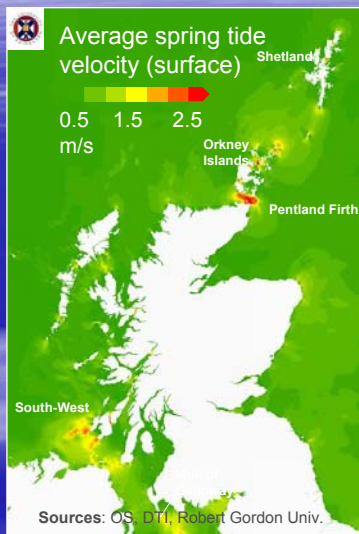
- Thermal energy conversion
- Tidal barrages
- Salinity gradient
- Marine biomass

- Offshore wind
- Wave energy
- Tidal currents

Offshore Wind & Wave



Tidal

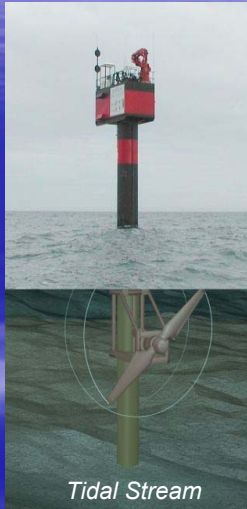
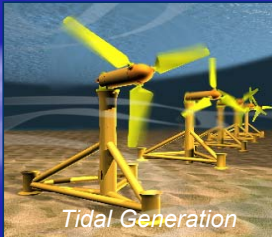
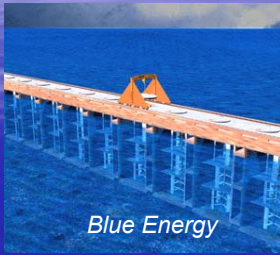


Tidal races in the Firth

- *The Merry Men of Mey*
- *The Swilkie (the svelgr or Swallower in Old Norse)*
- *The Duncansby Race*
- *The 'Liddel Eddy'*

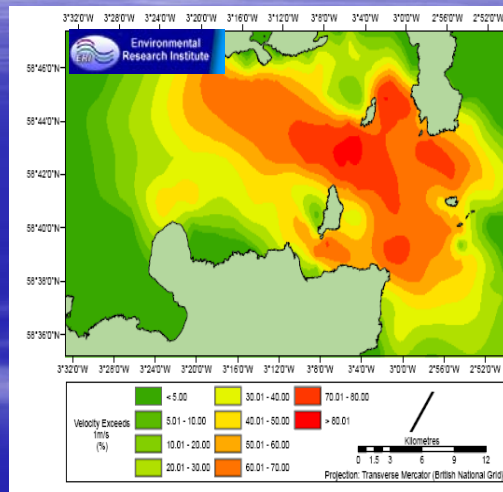


The devices



The resource

- Water density >800 times higher than air
- Spring tides of > 12 knts
- Theoretical tidal energy potential from Firth ~8GW
- 79% of the Scottish total
- Relies on motion of moon round Earth
- Predictable & reliable:**
Major supply advantage



The rhetoric

- *“Pentland Firth... is one of the world's top five sites for tidal energy”*
- *“...is the Saudi Arabia of marine energy”*
- *“...greatest untapped source of energy Scotland has ever had”*
- *“...powerhouse for the rest of the country”*
- *“...could become the new Dounreay....”*
- *“...is a once-in-a generation opportunity”*

Making it a reality



Target: 1,300 MW of marine power generated from the Pentland Firth by 2020

- Major contribution to renewables targets (40% by 2020)
- Timescale alignment with rundown of jobs at Dounreay

Challenges

- Resource assessment
- Environmental consideration
- Grid issues: Connectivity
- Investment: Private and public
- Timescales: Concerted and prompt action required



Opportunities.. 'an engine for growth'

- Research - "Institute of Energy & the Environment"
 - part of a world-class cluster
- Training provision - skills export
- Redeployment - building on Dounreay skills
- Development - Innovation & entrepreneurship
- Attract new businesses & industries
- Sustainable development
- Building 21st century economy and identity
- Partnership !



Growing Existing and Indigenous Industries

Sandy Cumming
Highlands and Islands Enterprise



Growing Existing and Indigenous Industries

- Current Sectors for Development
 - Manufacturing and Engineering
 - Food, Drink and Primary Products
 - Tourism
 - Services (incl. contact centres)
 - Public administration and Health
 - Further and Higher Education
- Potential High Growth Sectors
 - Energy – Marine Renewables
 - Environmental Research and Development
 - “Knowledge Economy

Growing Existing and Indigenous Industries

- Value added
 - Recognised that existing businesses need to add value.
- Expertise
 - Required for what needs to be developed.
- Marketing
 - Identify the needs
 - Develop the product and expertise
- Business voice
 - Need for single business voice
 - Collaboration driven

Growing Existing and Indigenous Industries

- Area infrastructure
 - Improvements to road, rail and air
 - Need to maintain health and school provision.
 - Identify more use locally for local products

FINAL THOUGHTS

- We have the **QUALITY**
- We have **CONFIDENCE** not complacency
- We are being **POSITIVE** – we can never lose the focus on the future.

Wick Regeneration

Willie Watt
Subsea 7 & Wick Harbour Authority



Wick Regeneration

Where we were:



Wick Harbour 1865

Wick Regeneration

Where we are



Wick Harbour 2007

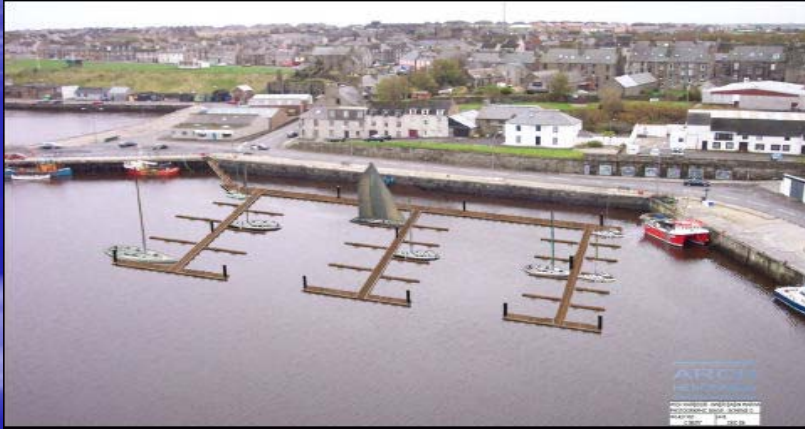
Wick Regeneration

What we are planning



Wick Harbour Projects

Wick Regeneration
Marina Phase 2 project



Wick Harbour 2008

Wick Regeneration
Where we are going



Wick Harbour 2012

Wick Regeneration

Business we will attract.

- **Offshore Service / Supply**
- **Marine renewable energy**
- **Cargo – Europe/China**
- **Ferry / freight facilities**
- **Property / industrial development**
- **Leisure and tourism**



Wick Regeneration

How do we do it?

Together!

Messages from Lecture Session

Rob Gibson MSP



Messages from Lecture Session

- Holger Bergmann
 - Research into impact of decommissioning
 - 1/3 Caithness and Sutherland jobs linked to Dounreay
 - Equivalent to 10% growth across other sectors
 - Infrastructure and transport important
 - Be imaginative about how we see ourselves
 - Build on our entrepreneurial culture

Messages from Lecture Session

- Jane Farmer
 - Organisations e.g. health & education provide services, but also have a big hidden value
- 'Capital model'
 - Human (eg. skills, knowledge, connections, confidence)
 - Social (eg. Contribution of employees within community)
 - Institutional (eg. facilities, symbolic value)
 - Economic (eg. financial impact)
 - Natural (eg. Carbon footprint)

Messages from Lecture Session

- David Rhind
 - NDA Role
 - Note of realism
 - NDA investment must support NDA mission
 - Local lead required, NDA strong partner
 - Need to create high value jobs and skills
 - Investment funded from savings
 - Investment in other energy sources???



Caithness Conference

Beyond Dounreay

