

A POST CARBON GUIDE 

Relocalize Now!

*Getting Ready for
Climate Change and
the End of Cheap Oil*



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Necessary Voices Speaker Series

Vancouver Public Library

Central Branch

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Without Any Energy...

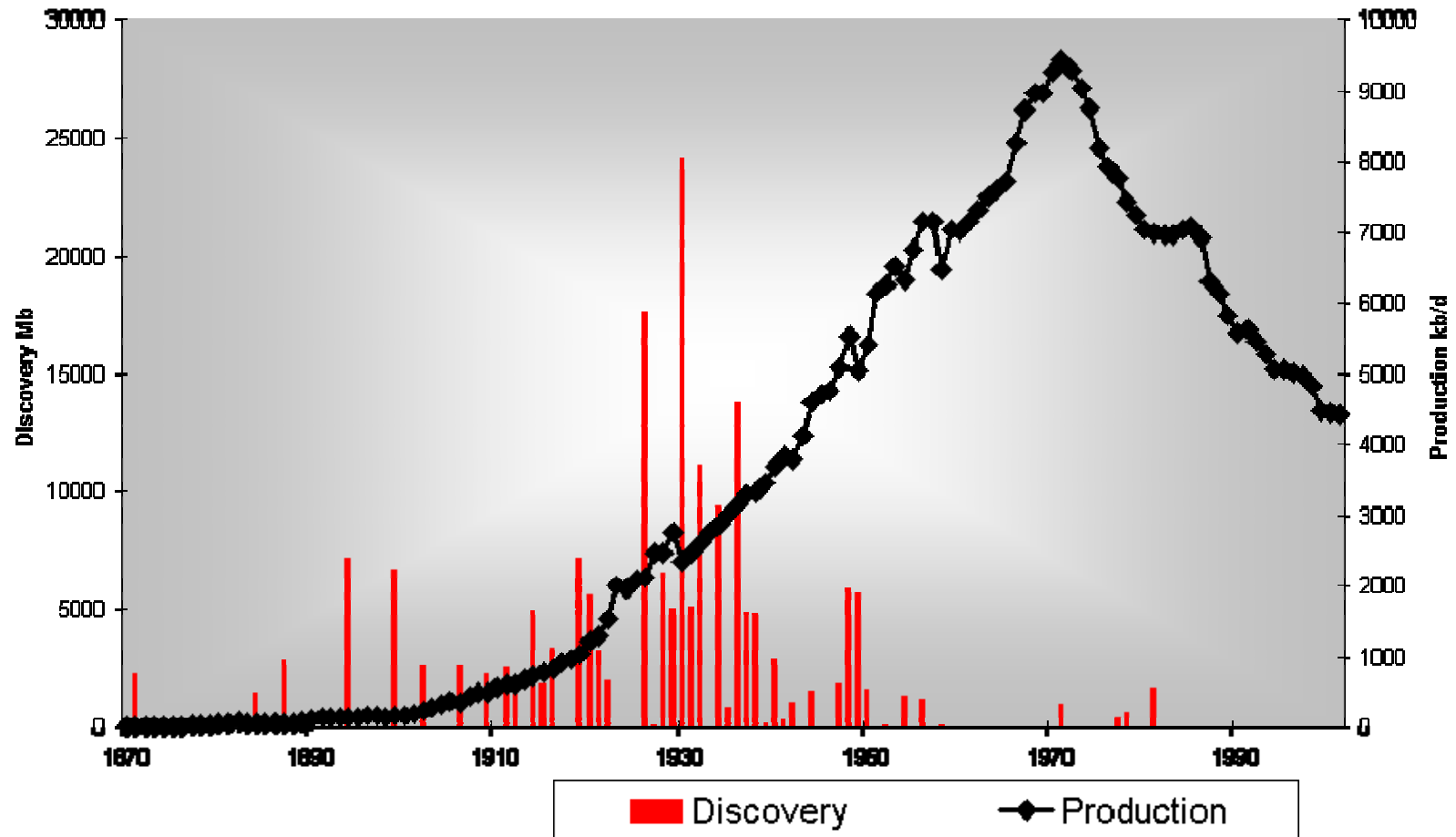
- We're dead!
- Without 'Big Energy'...
 - so is the industrial way of life

So How Is Big Energy Looking?

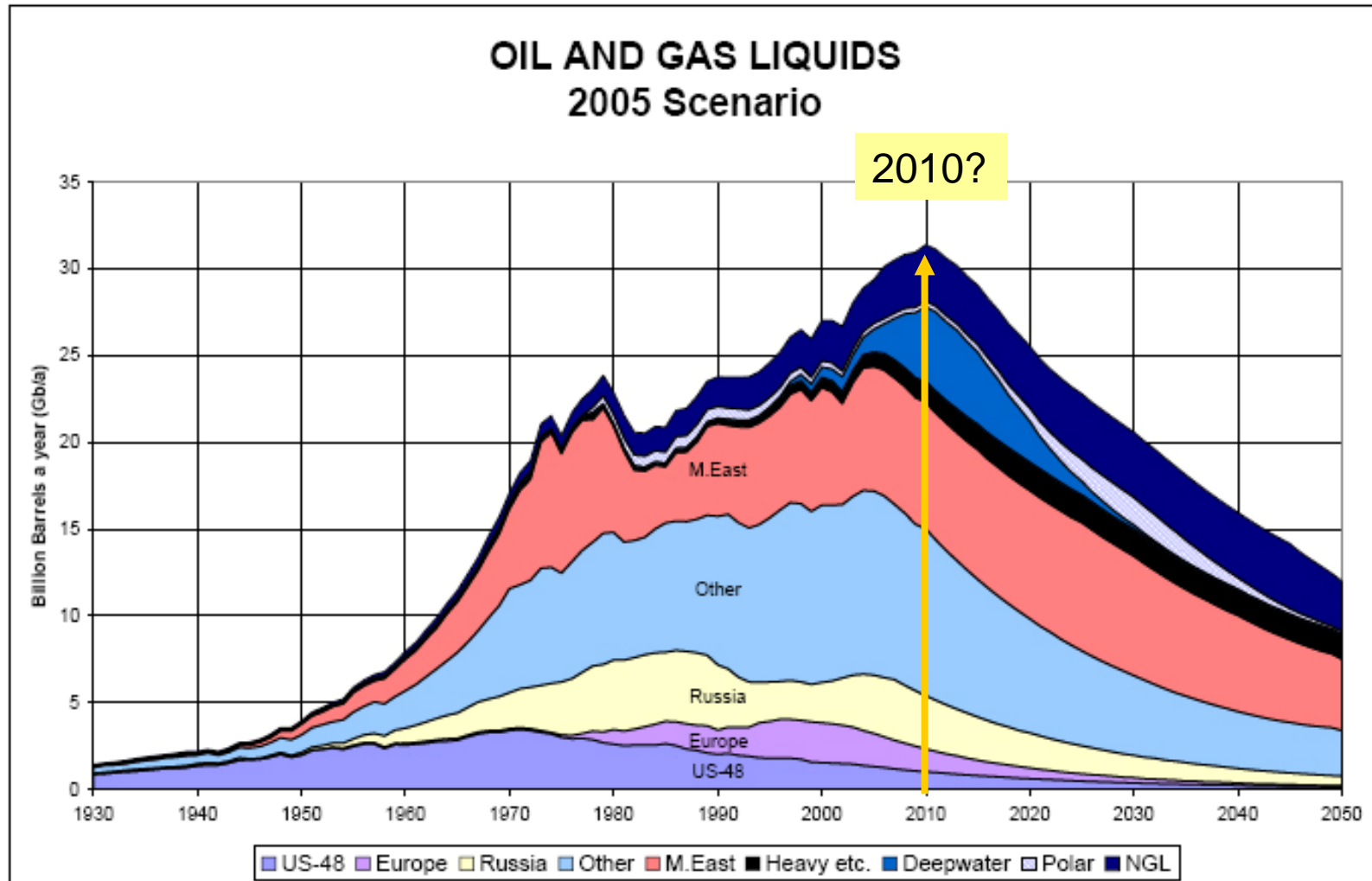
- First some logic & then some history...
- The Logic:
- Before you produce (extract) oil or gas, you must find it!
- And now the history:

First Great Oil Peak

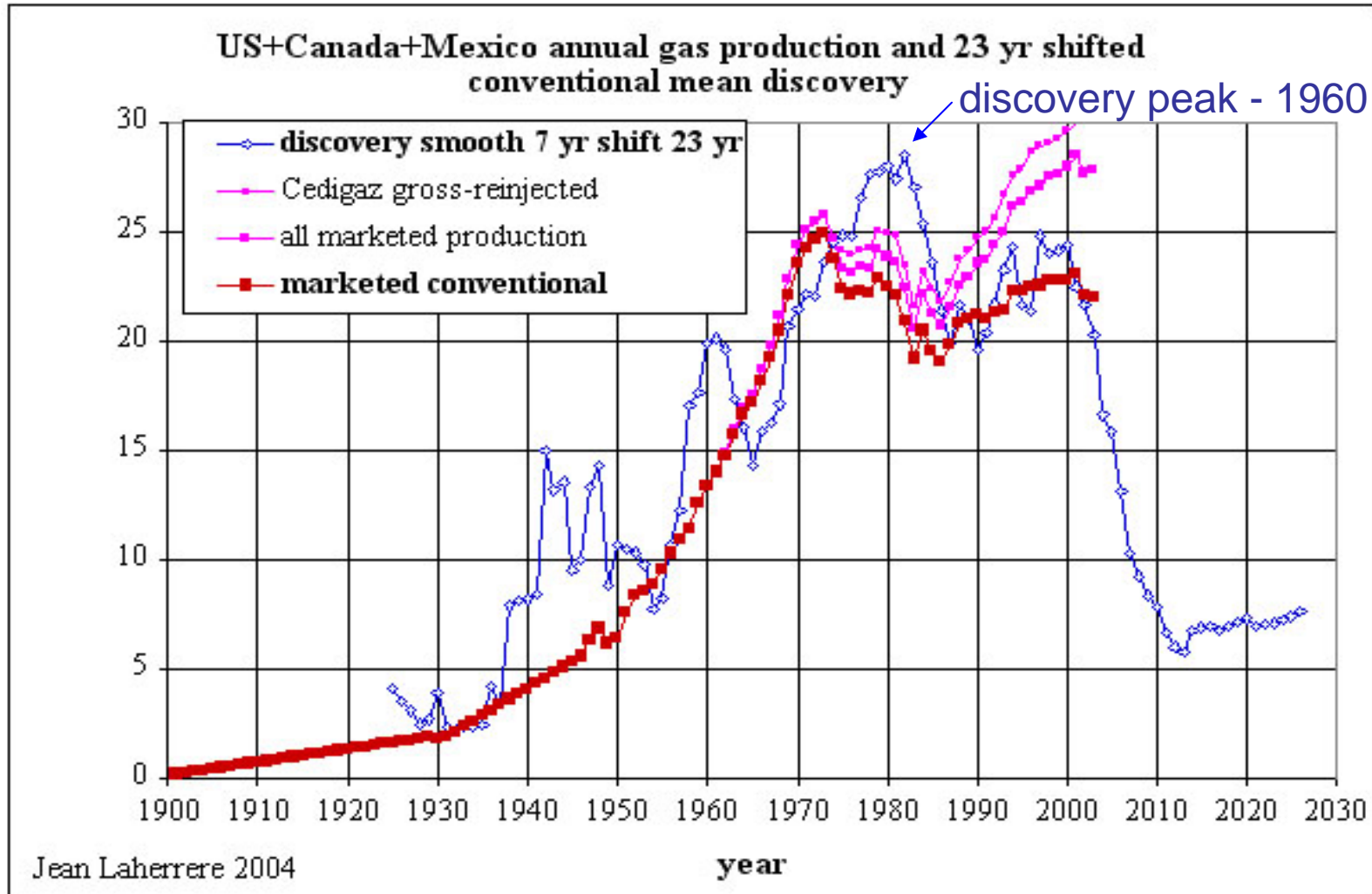
US Conventional Oil in the Lower 48 states



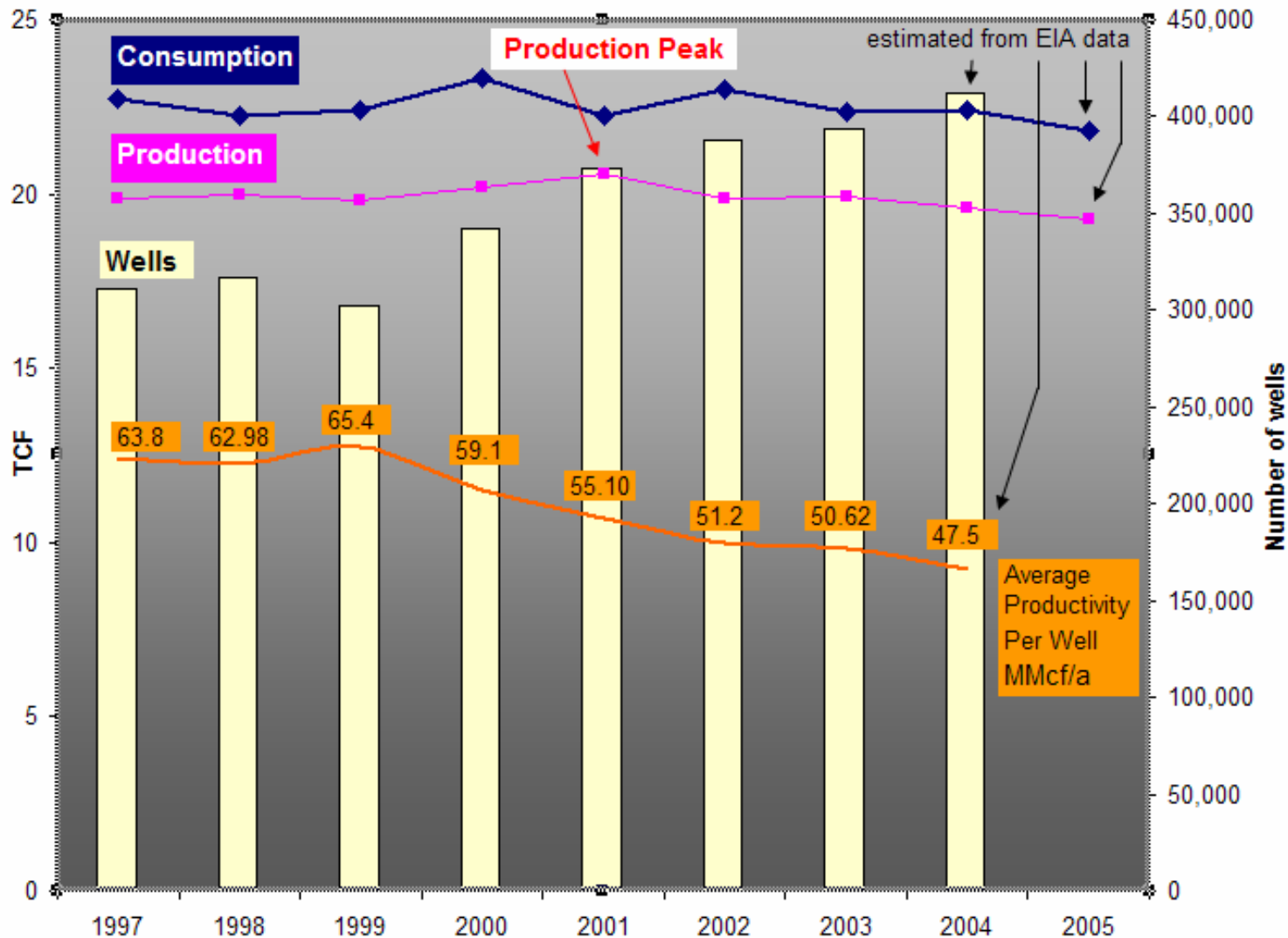
The Rise & Fall of Petroleum



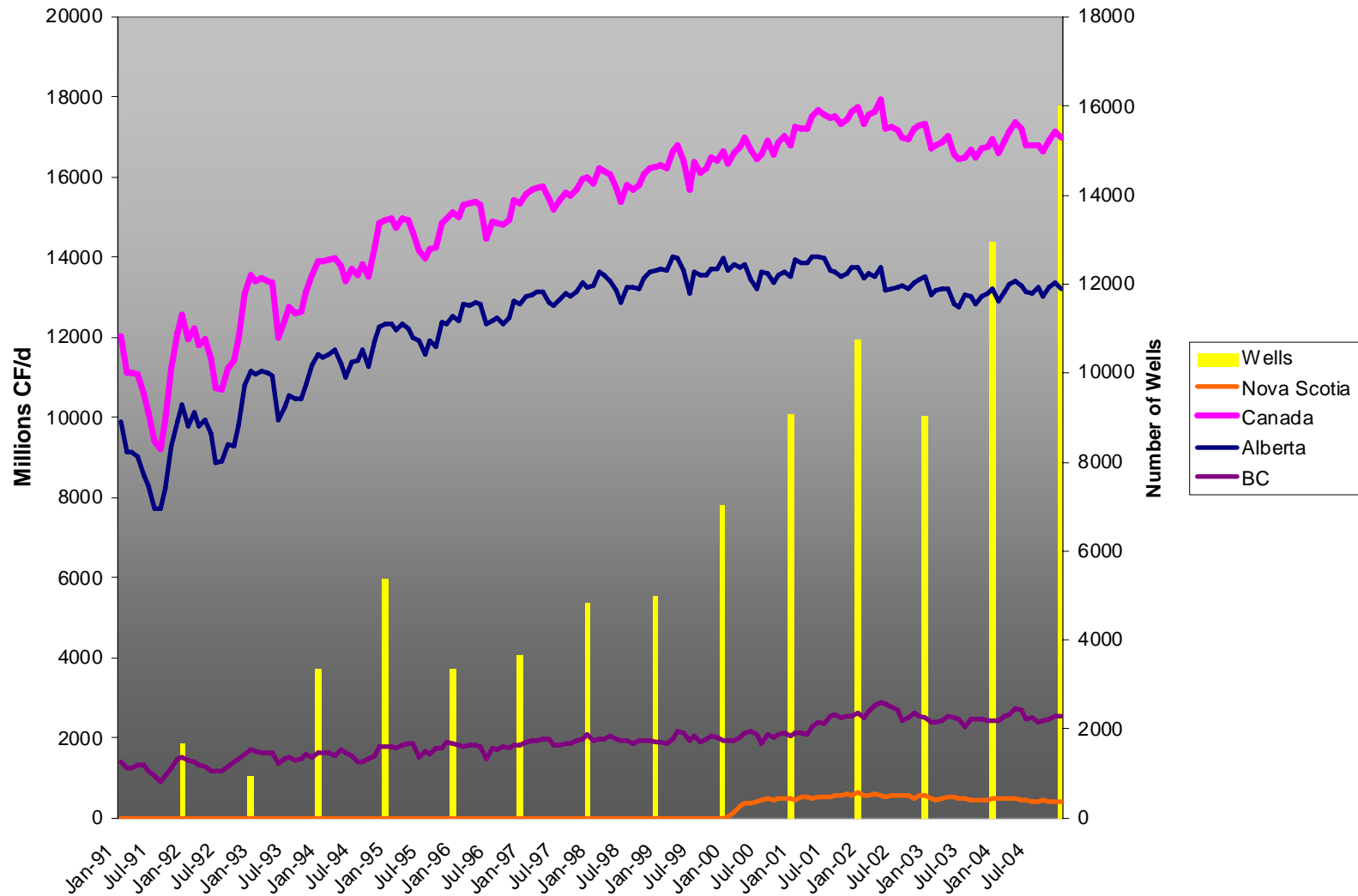
Gas Discovery and Extraction in North America



The Decline of US Gas

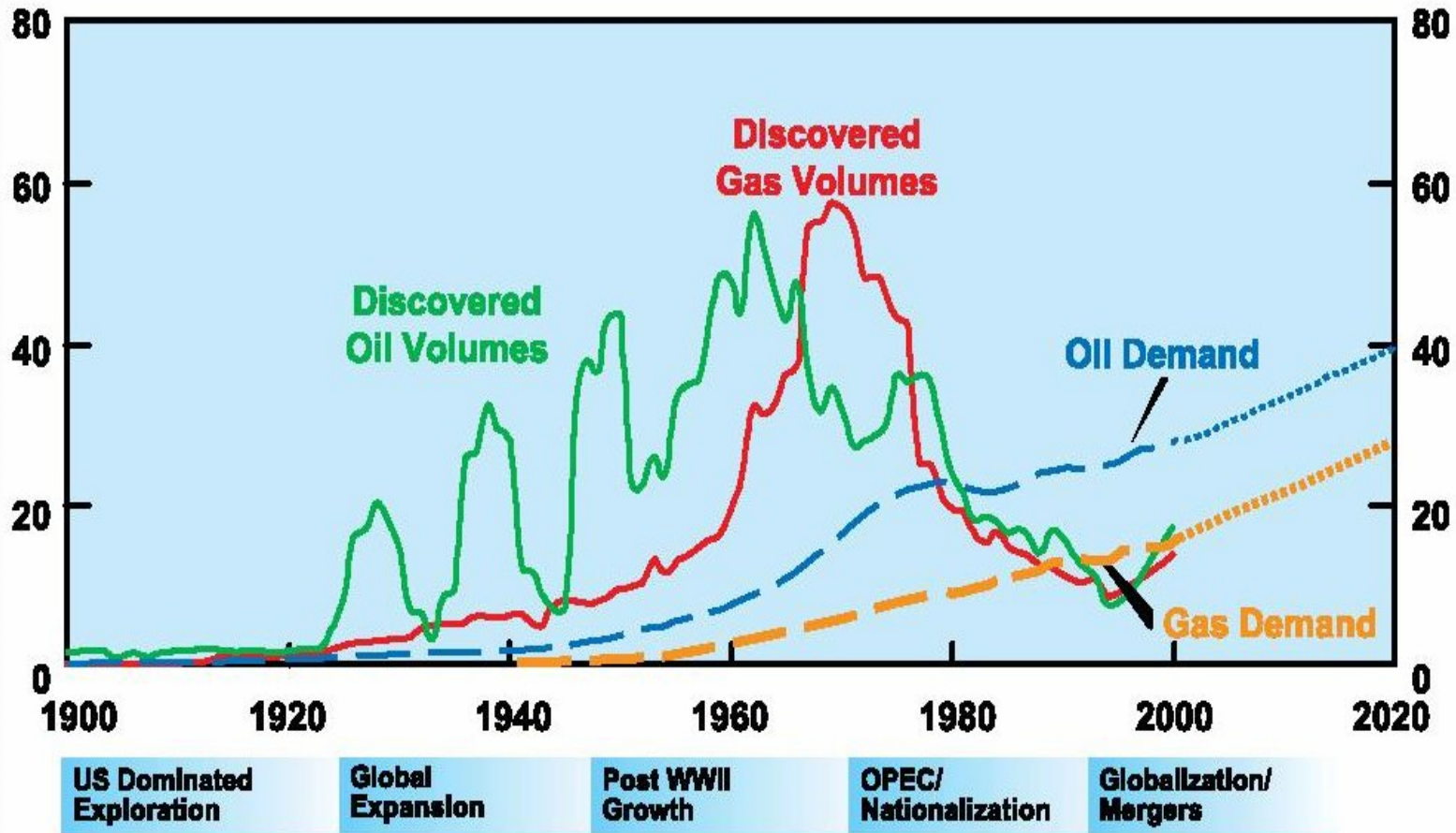


Canadian Gas Production



Exxon-Mobil: implicit admission

Billions of Oil-Equivalent Barrels



BC's 'Big' Energy Resources

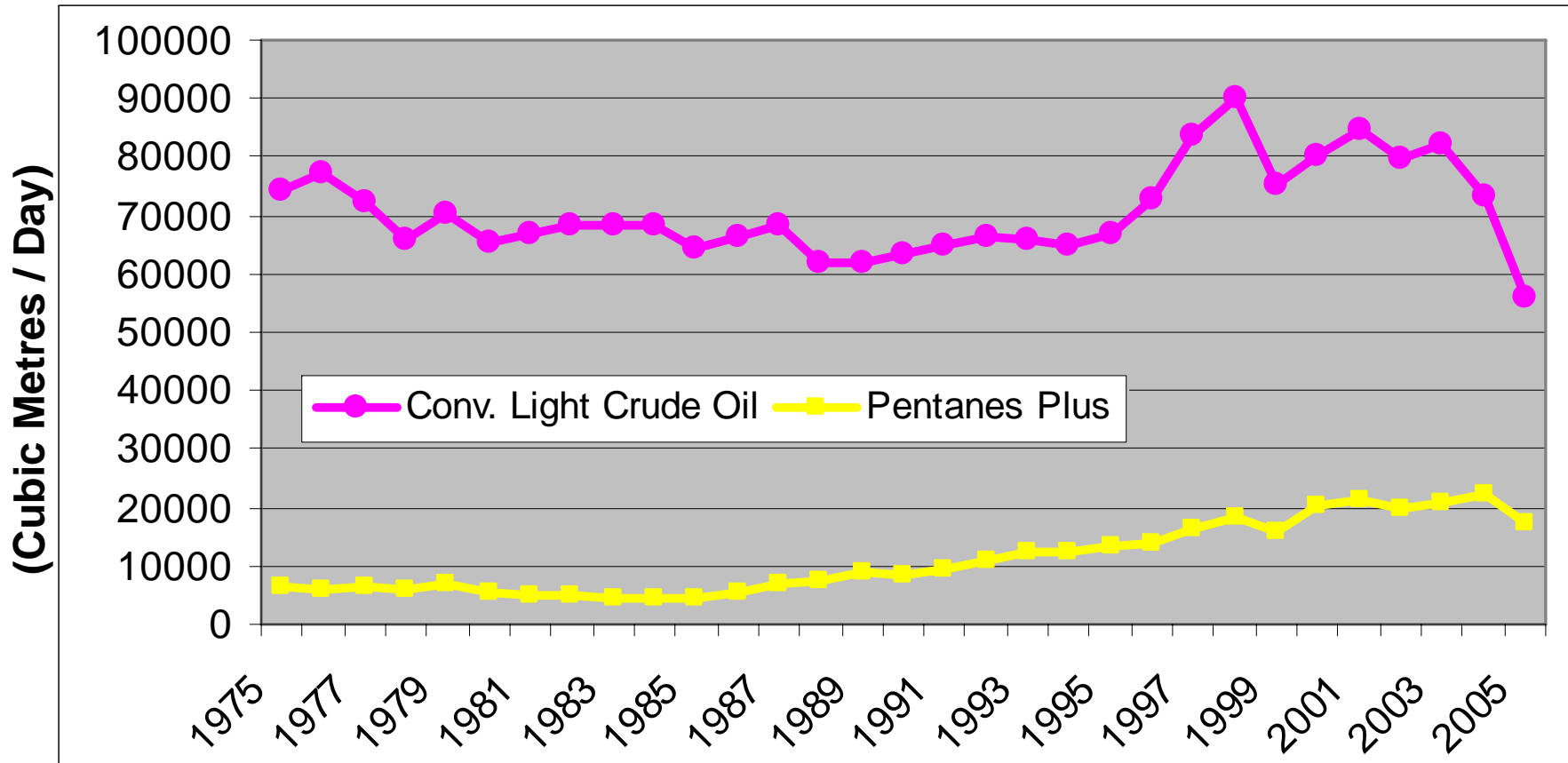
- Natural Gas
 - Production – 31.3 billion cubic metres (2004) [1200 M GJ]
 - Consumption – 6.9 billion cubic meters (2004) [263 M GJ]
 - Reserves – 260 billion cubic meters (marketable gas) (2004)
- Petroleum
 - Production – 2.7 million cubic meters (2004) [104 M GJ]
 - 17 million barrels oil
 - Consumption – 12.1 million cubic meters (2004) [466 M GJ]
 - 76.1 million barrels oil
 - Reserves – 22 million cubic meters (2003)
 - 138 million barrels oil

BC's 'Big' Energy Resources

(+ some renewables for comparison)

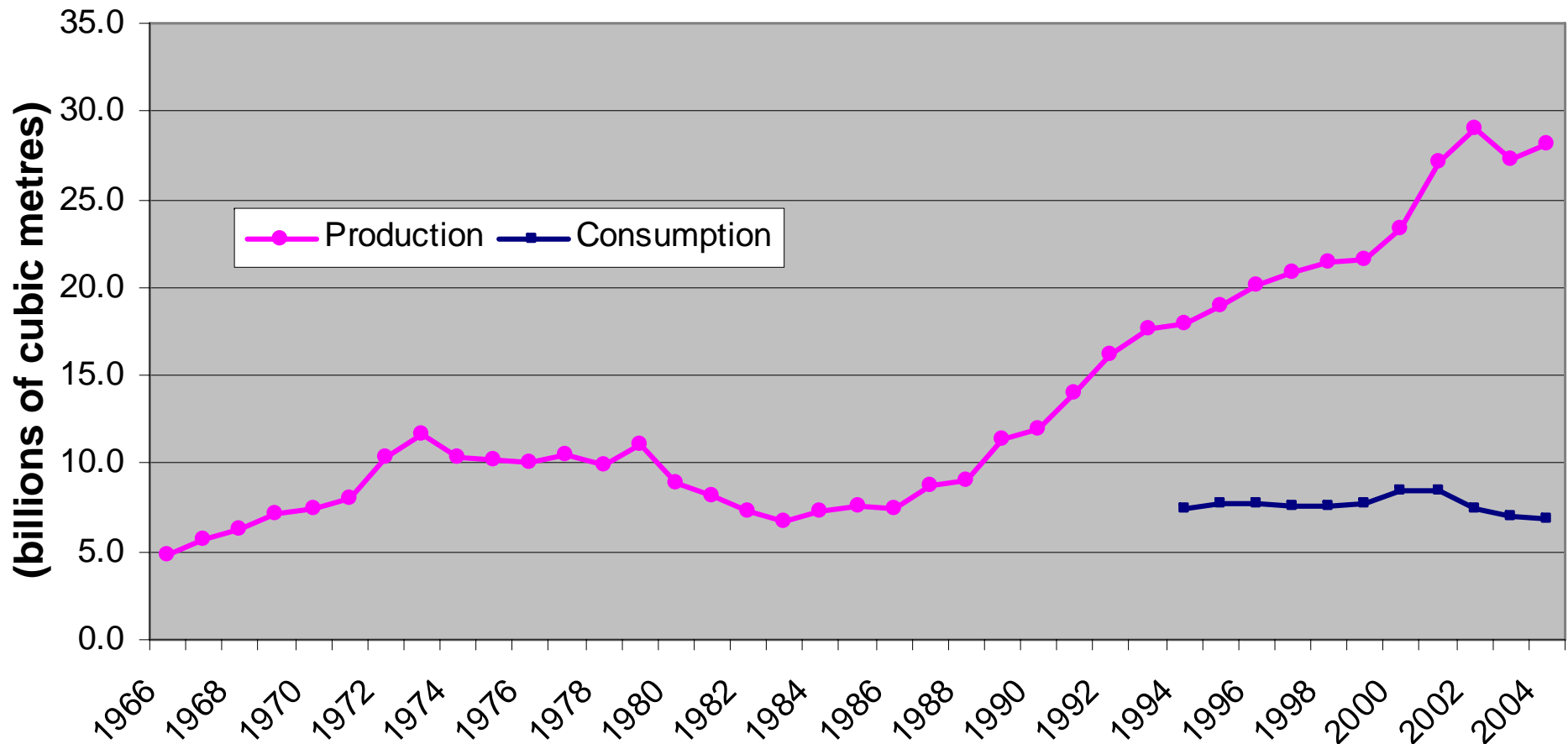
- Coal
 - Production – 25,681.4 kilotonnes (2000) [620 M GJ]
 - Consumption – 558.1 kilotonnes (2004) [13.5 M GJ]
(Energy use, final demand)
 - Producer Consumption 263.8 kilotonnes (2004)
- Electricity
 - Production – 56,929 Gigawatt hours (2003) [205 M GJ]
 - Consumption – 59,622 GWh (2003) [215 M GJ]
 - A 1 MW wind turbine may produce 1 GWh per year [3,600 GJ]
(in Germany usage averages 11% of boilerplate capacity)
 - A 1 metre square PV panel produces less than 1GJ
(assumes 2,000 hrs sun, average 1kW, 10% conversion,
200 kWh = 0.75 GJ - costs about \$1000 with installation)

BC Crude Oil Production* (1988 – 2005)

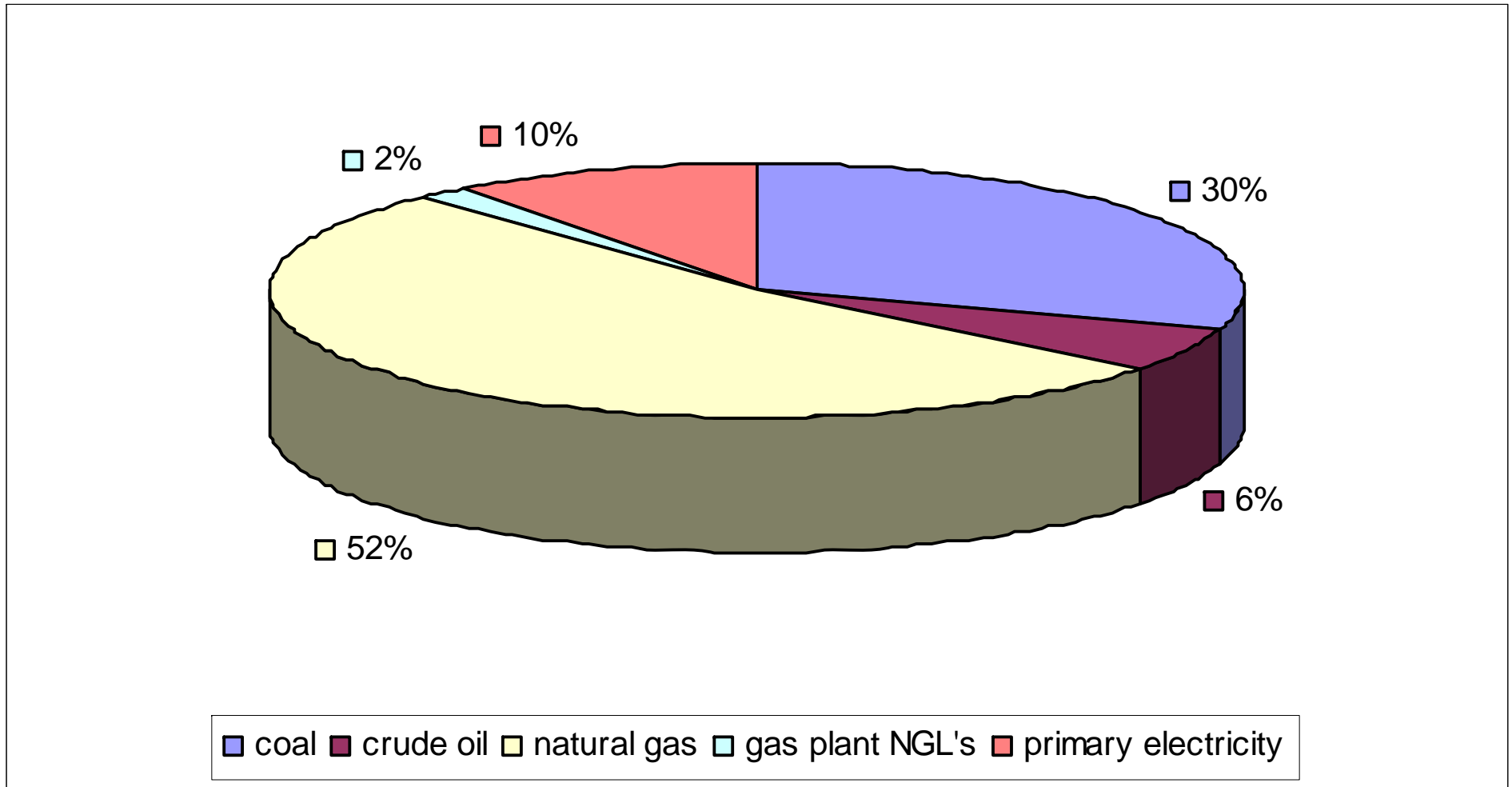


* Annual production is an estimate based on the monthly averages for each year

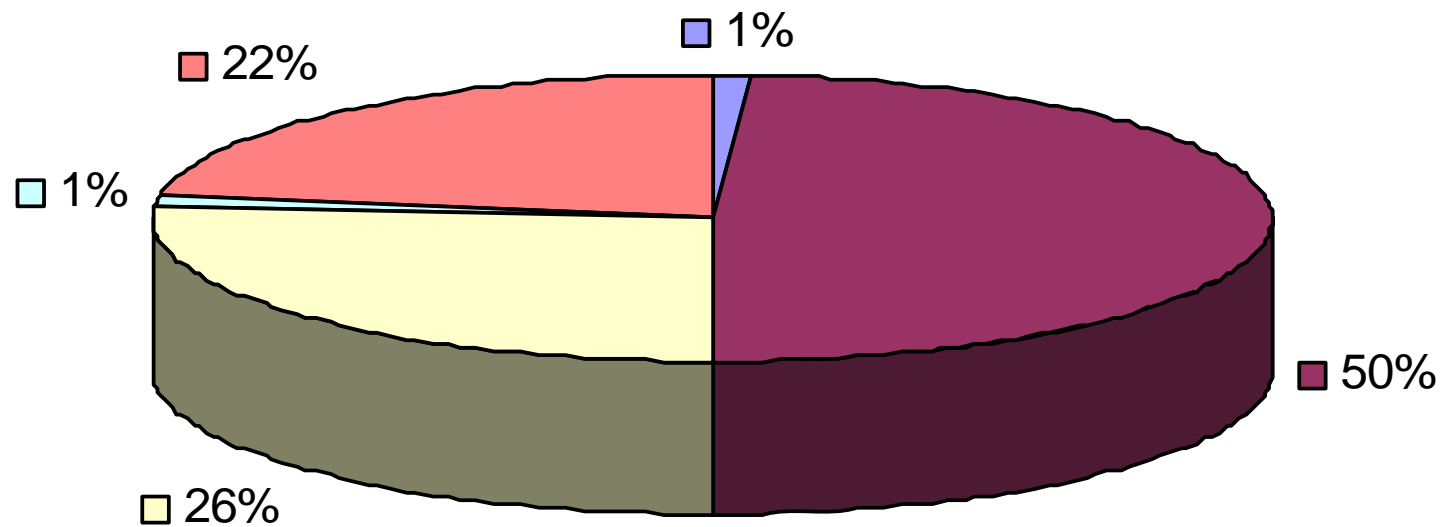
BC Natural Gas Distribution and Consumption (1966 – 2004)



BC Energy Production (2003)

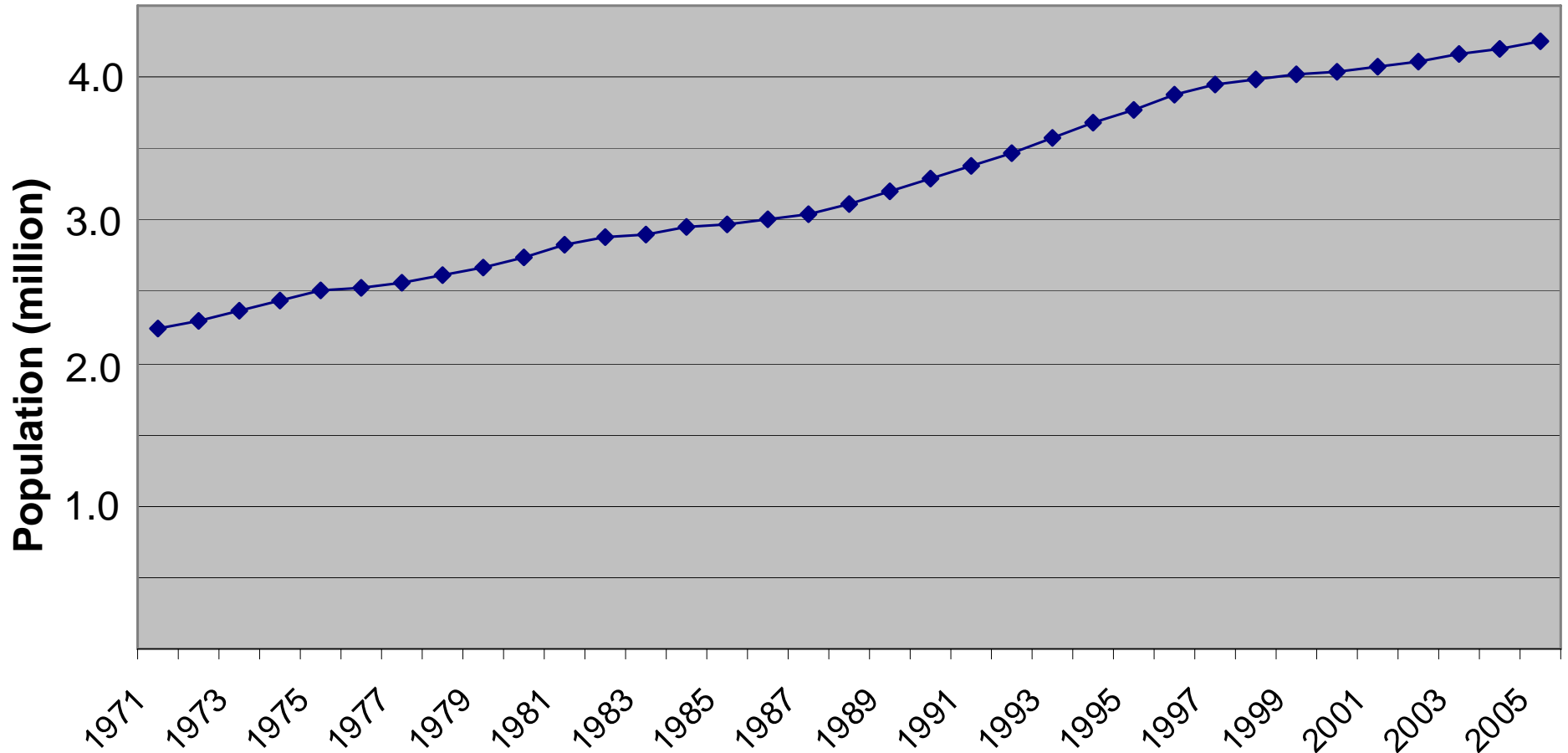


BC Energy Consumption (2003)

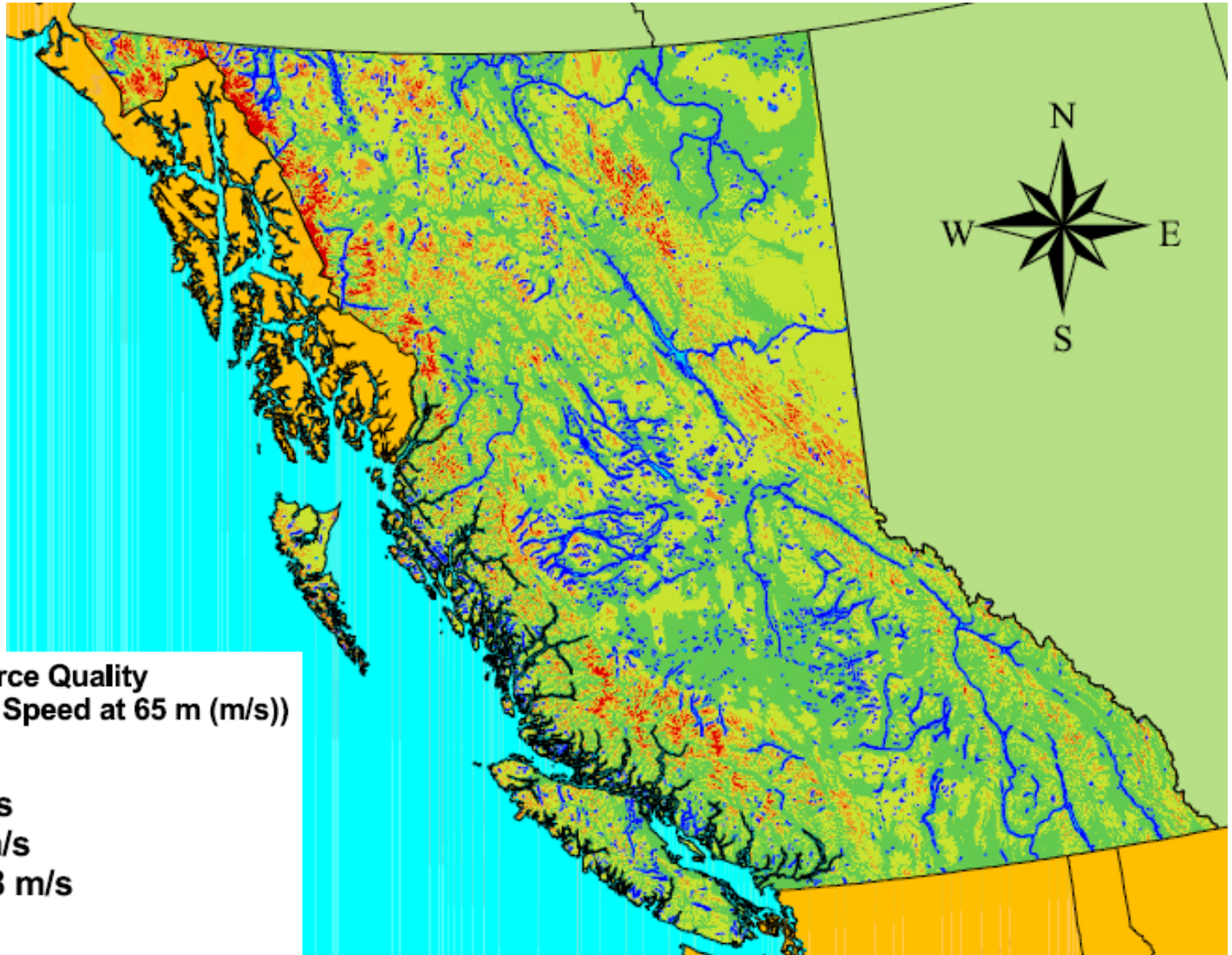


■ coal ■ petroleum ■ natural gas ■ gas plant NGL's ■ primary electricity

British Columbia Population (1971-2005)



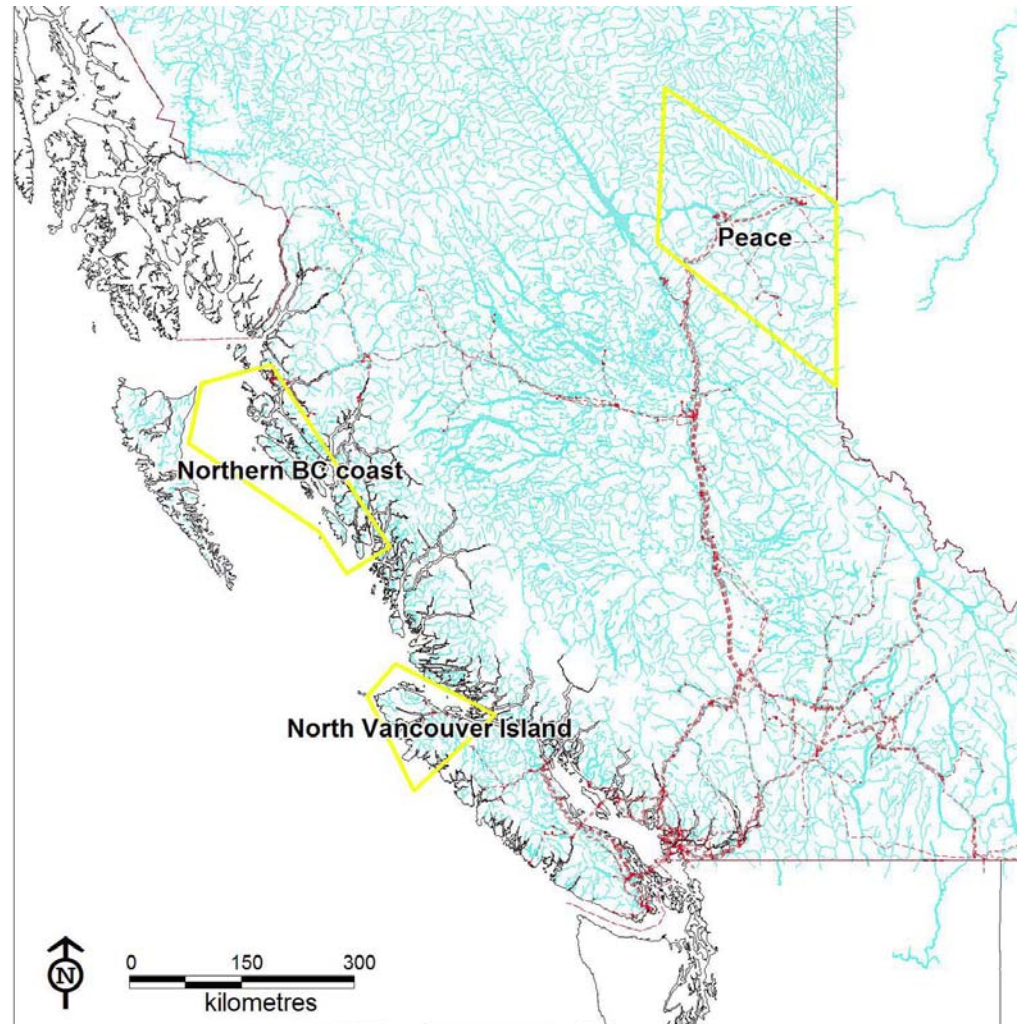
Wind Power Potential in BC



**Predicted Wind Resource Quality
(Annual Average Wind Speed at 65 m (m/s))**

- Poor < 4 m/s
- Fair 4 to 6 m/s
- Good 6 to 8 m/s
- Very Good > 8 m/s
- No Data

Major Wind Resources in BC



Global Relocalization

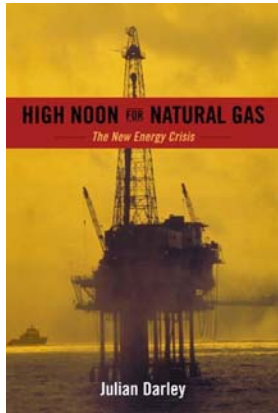
- Paradoxes
- Contradictions
- Reduce / Produce - Ninety Percent Less & Make The Rest
- To Reduce: Move From Fuel To Foot Economy
- To Produce: Move From Consumer Economy To Community Provisioning

It's The System

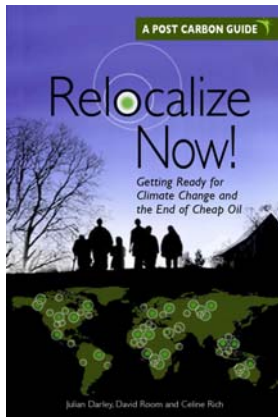
- **This is a systemic & infrastructural problem**
 - individual responses will not go far
- Capitalism is a system of extractive, 'efficient' production that must expand forever
- Unemployment could be very widespread, compounded by the money system
- Many existing connexions will need to be broken, new ones formed
- Those who cooperate and share will do much better than those who fight



For interviews about oil & gas peak
www.globalpublicmedia.com



High Noon for Natural Gas
The New Energy Crisis
by Julian Darley
Available from store.postcarbon.org



Relocalize Now! Preparing for Climate Change & the End of Cheap Oil
by Julian Darley, David Room, Celine Rich & Richard Heinberg
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