

# **Energy poverty and social tariffs**

Presentation to

## **Inequality: Causes and Consequences**

**Victoria University**

**19 June 2014**

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# What is 'energy poverty'?

Inability of a household to afford a sufficient level of energy services in the home

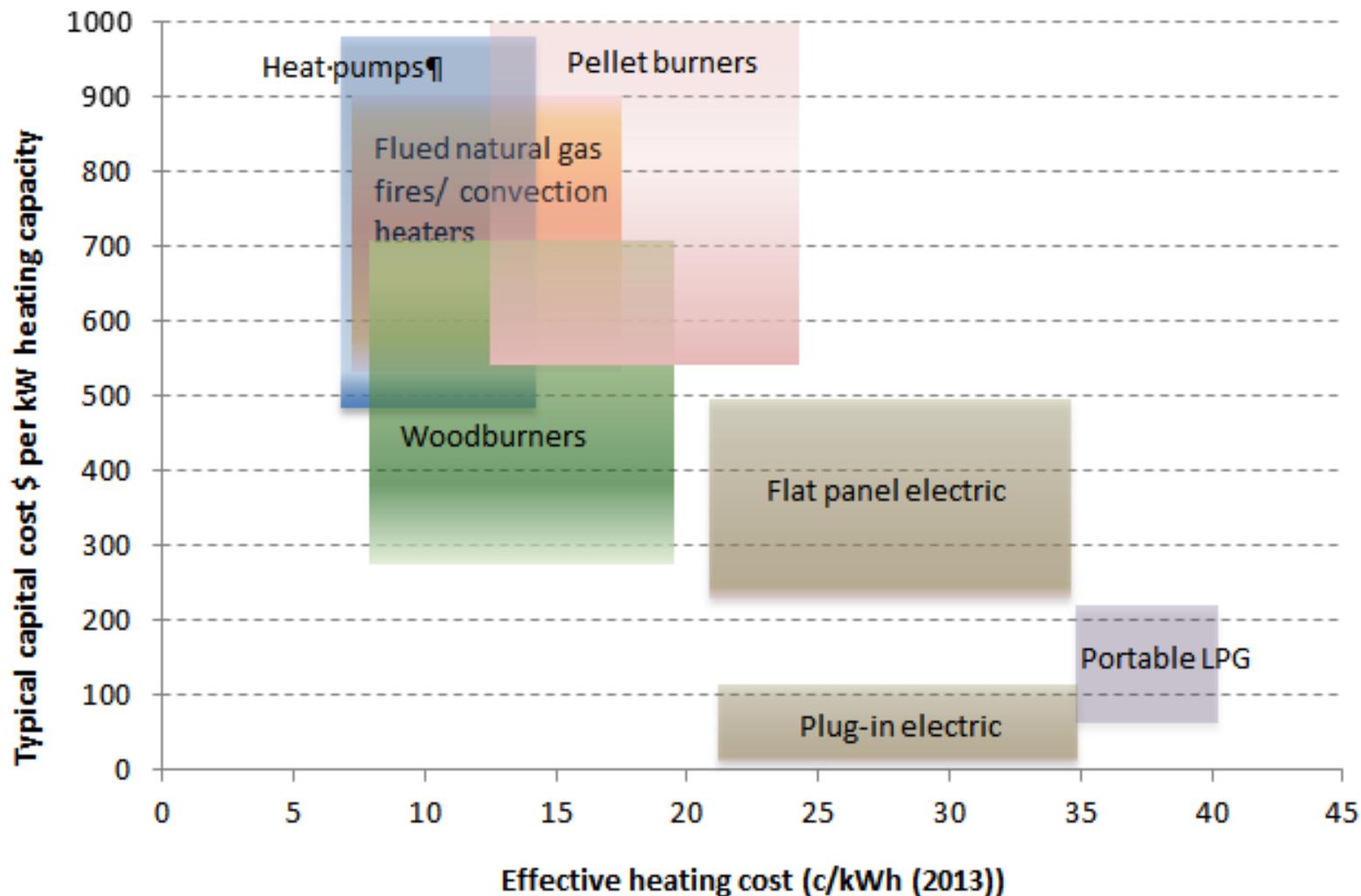
- ▶ Disputed concept
  - ▶ shouldn't be specific to energy - essentially a manifestation of 'poverty'
  - ▶ Definitions and terminology e.g. 'fuel poverty'

# Why should energy poverty be on the policy agenda?

Expression of inequality and unequal access to an essential set of services

- ▶ Energy services are social and health necessities
- ▶ Limited substitutes or alternatives:
  - ▶ Energy: Capital substitution
  - ▶ High reliance on electricity
  - ▶ No discount supermarket or TradeMe market for energy
- ▶ Exposure to 'poverty premium' effects
- ▶ Market failure

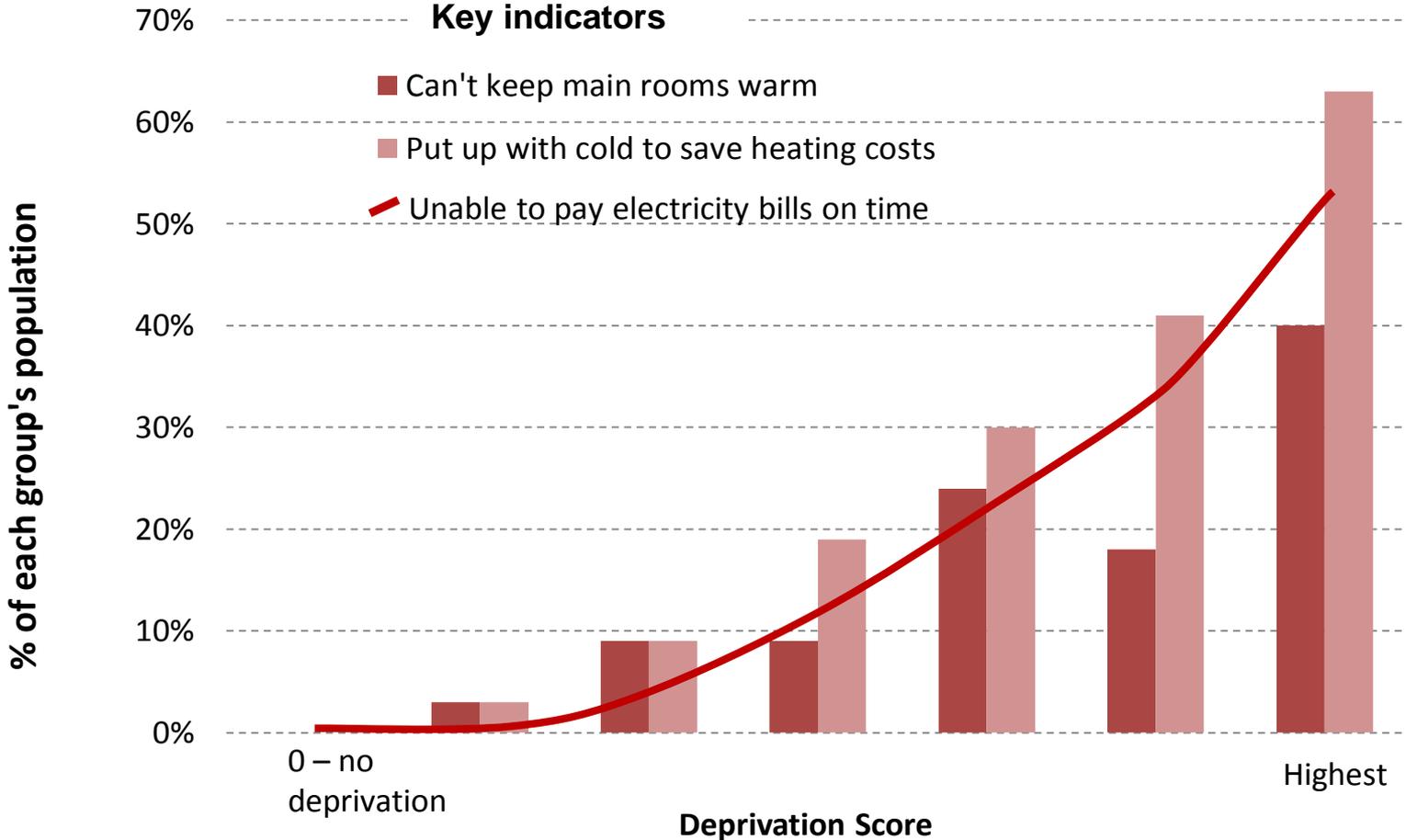
# Heating – capital vs running costs



Source: Home Performance Adviser programme (CEN, Beacon, Enviroschools)

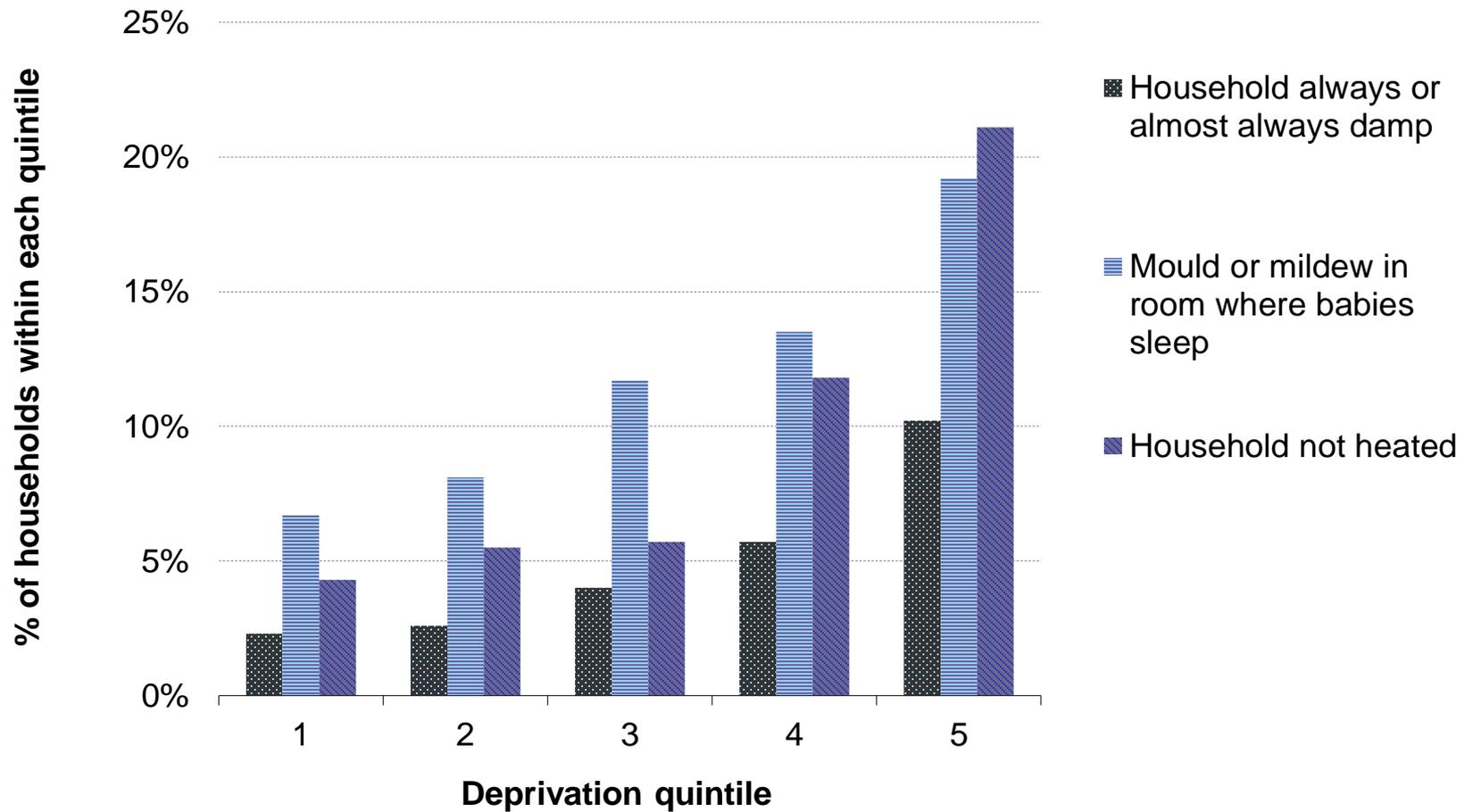
# Indicators

## Energy service deprivation



Source: Adapted from Bryan Perry (MSD) from NZ Living Standards Survey

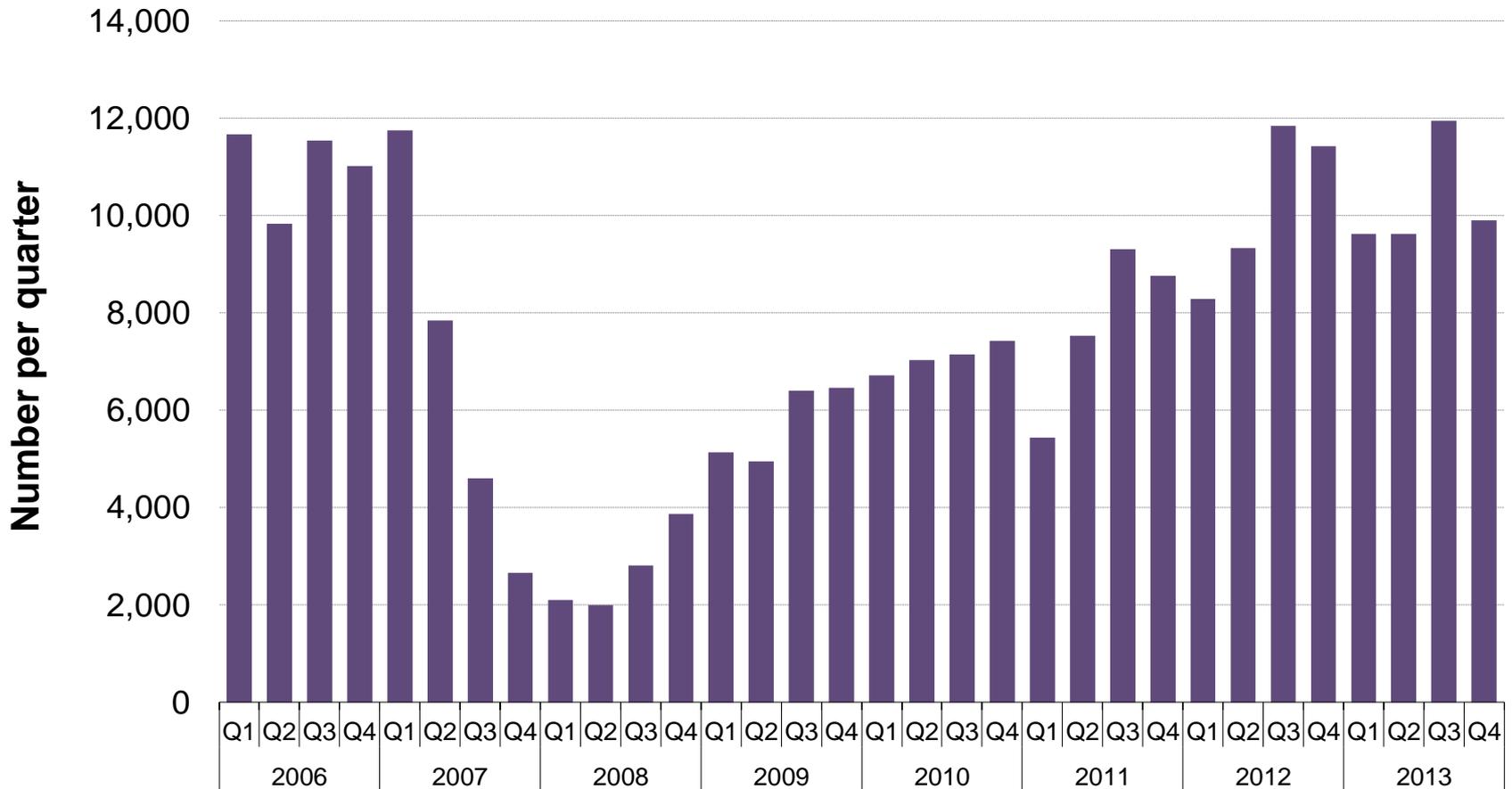
## ...a similar pattern for households with babies



Source: Growing Up in New Zealand Study

# Indicators

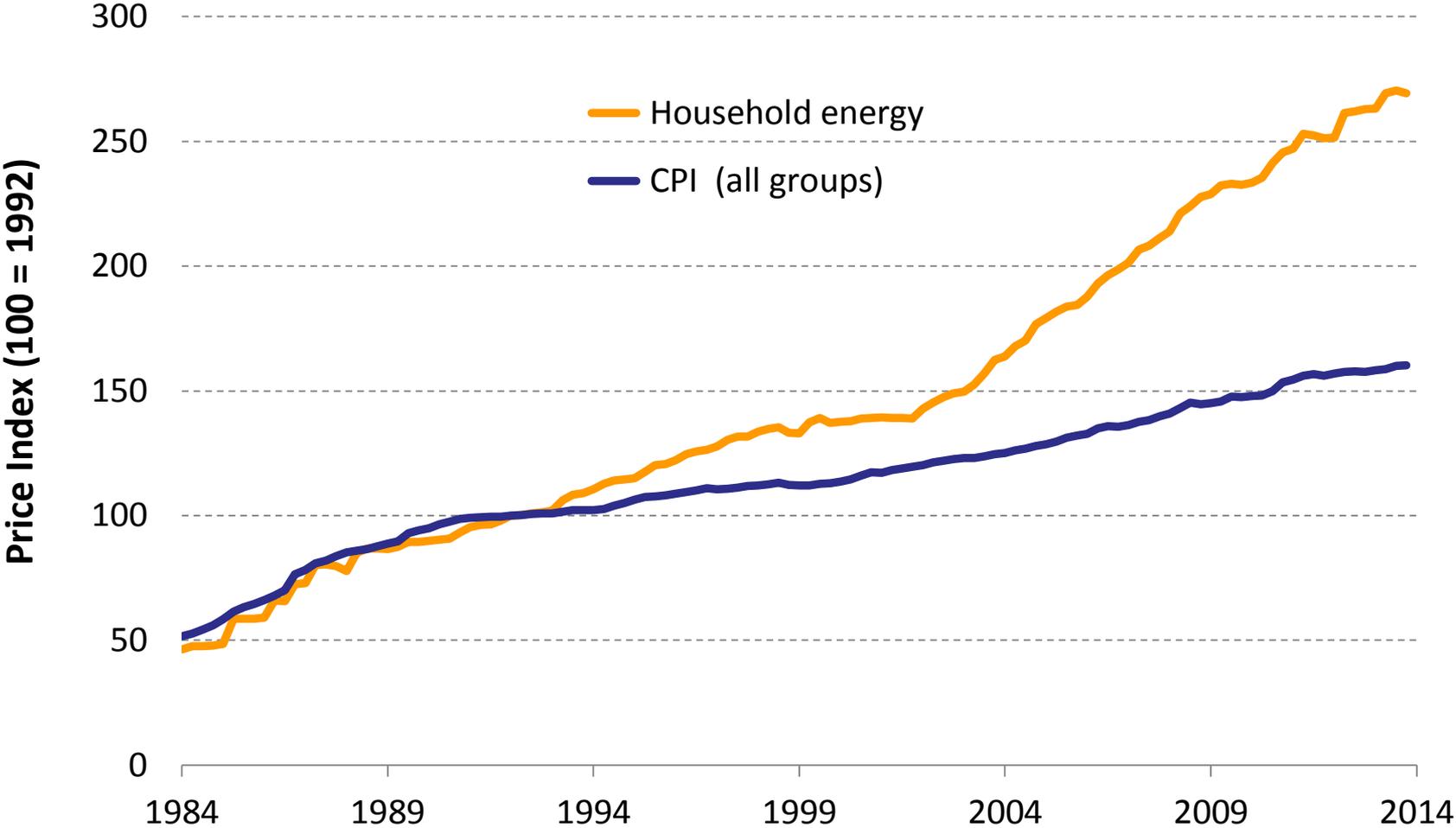
## Disconnections for non-payment



Source: Electricity Authority

# Indicators

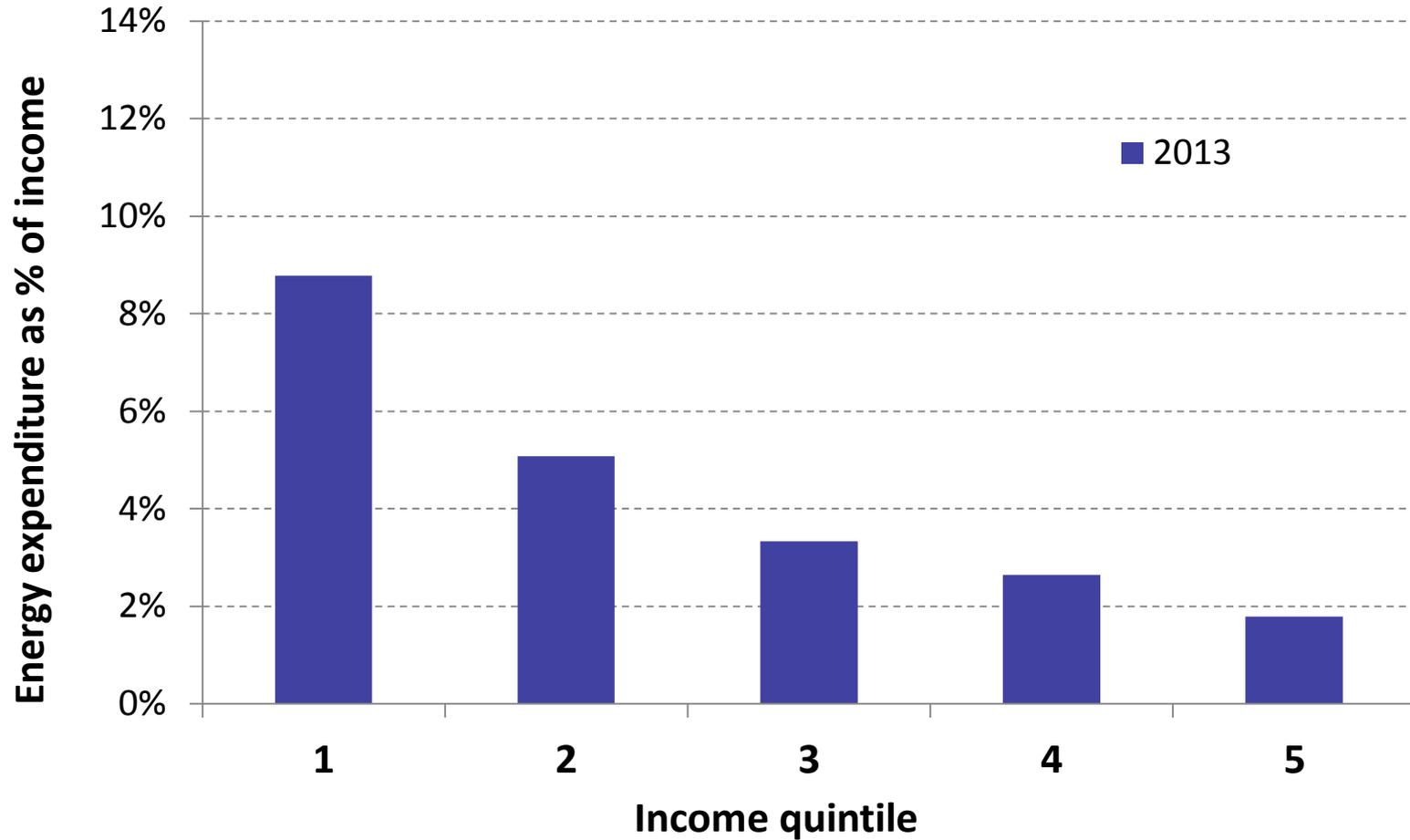
## Household energy price increases



Source: Statistics New Zealand CPI data

# Indicators

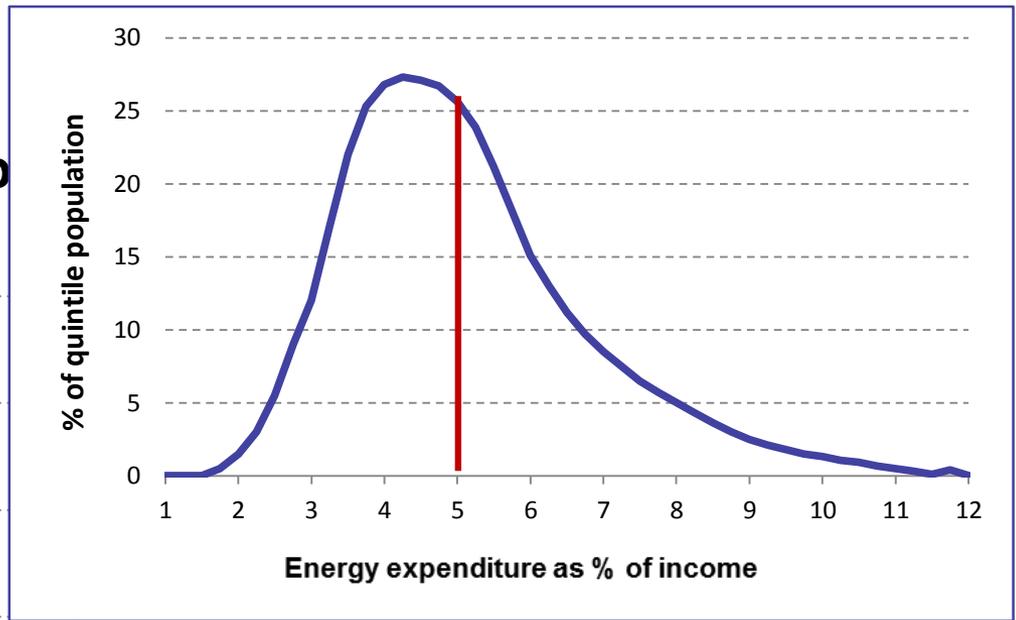
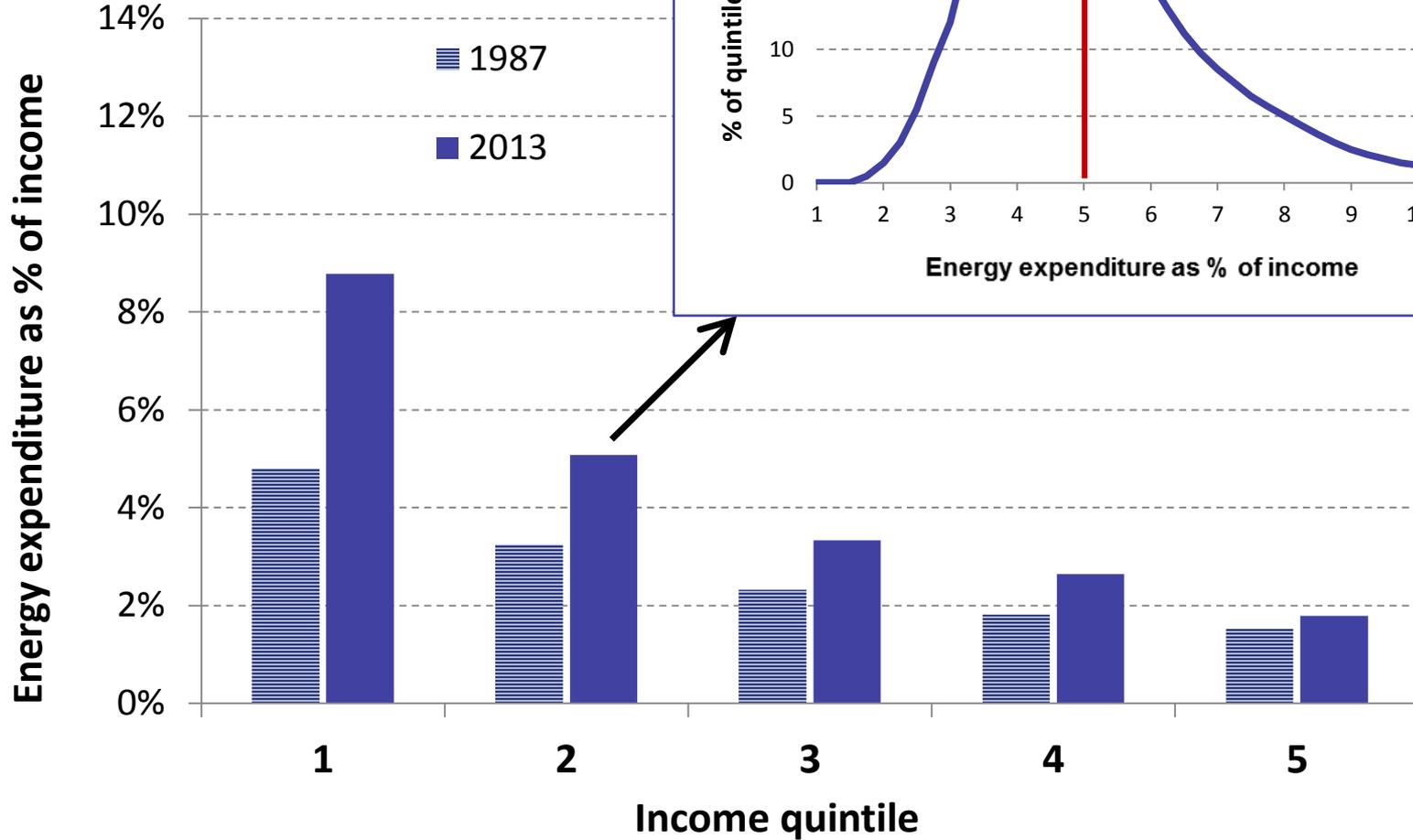
## Uneven impact of energy prices and costs



Source: Household Economic Survey

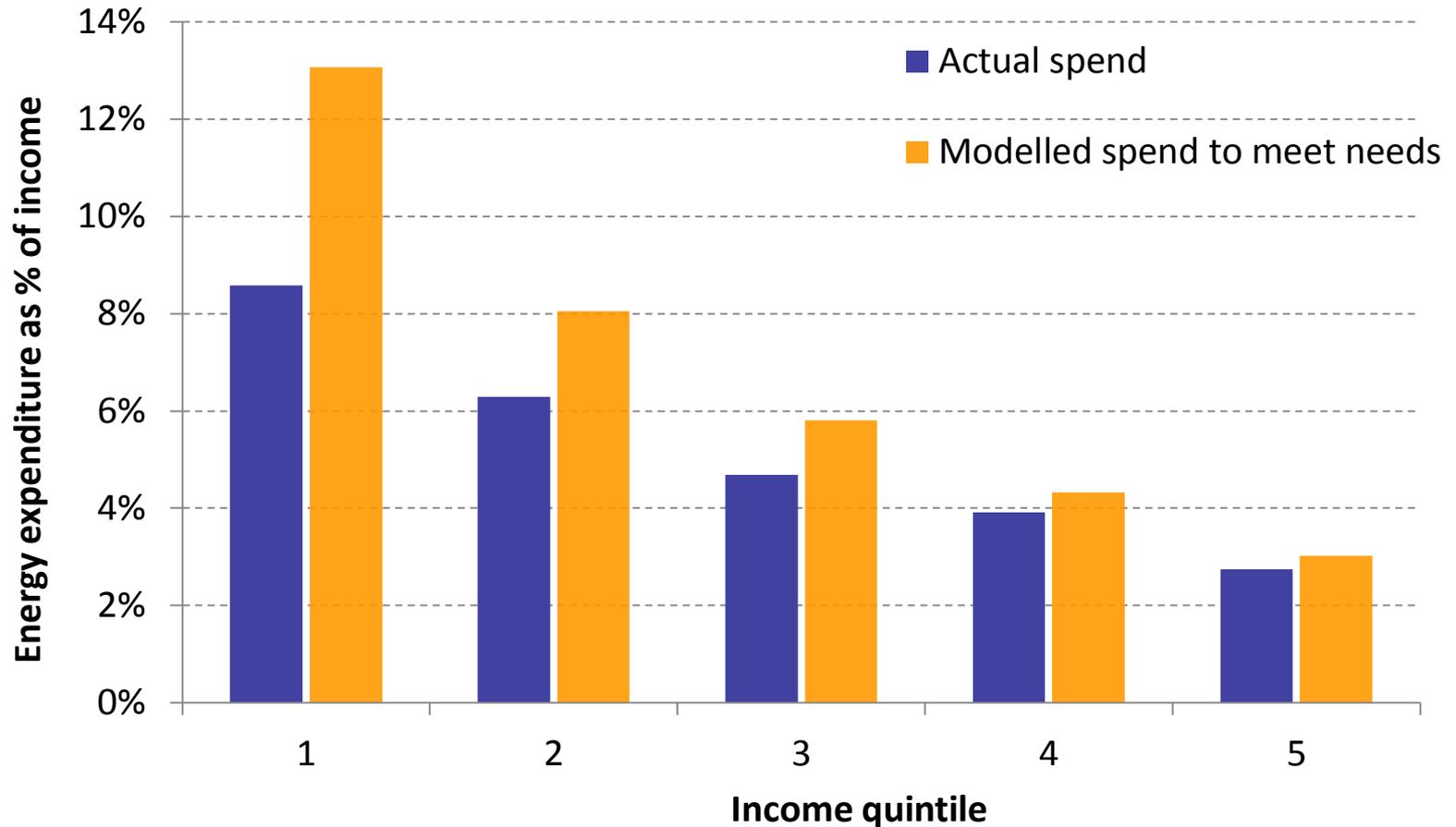
# Indicators

## Uneven impact of energy p



# Indicators

## UK analysis of actual vs 'needed' expenditure



Source: UK Department of Energy and Climate Change

# Summary

- ▶ Estimated up to one-third of households display varying levels of energy deprivation
- ▶ Affects large and small households
- ▶ High proportion in rented accommodation
- ▶ High dependency on electricity

Patchy policy response to date – limited range of options, policy area lacks focus and lacks detailed information/analysis

# Energy options to address energy poverty

<b>Energy cost related</b>	Energy options and prices <ul style="list-style-type: none"><li>• Energy choices, type</li><li>• Tariff options, structures, discounts, rebates</li></ul>
	Energy efficiency <ul style="list-style-type: none"><li>• Grants e.g. insulation, heating</li><li>• Standards, WOF</li></ul>
	Occupant behaviour <ul style="list-style-type: none"><li>• Advice, education, feedback</li></ul>

# Social Tariffs

- ▶ Discounted tariffs or rebates available selectively for vulnerable households – also often include gas
  - ▶ Examples commonly found throughout Europe, North America
- ▶ Rationale mixed: core social purpose.....market failure
- ▶ Generally mandated/regulated but sometimes offered ‘voluntarily’ by energy retailers
- ▶ When mandated, funded by additional levies on consumers – e.g. *‘public service obligations’* (PSOs) or similar

# Examples

Country	Comment	Level of discount	Impost of PSO
Belgium	<ul style="list-style-type: none"> <li>Different levels of social tariffs for electricity by region.</li> </ul>	~30-40%	~3-7%
France	<ul style="list-style-type: none"> <li>Social tariff for gas and electricity</li> <li>Applies to approx 4m households (~15% )</li> </ul>	Up to €200/yr for gas heating  Up to €90/yr for electric	~2-3%
UK	<ul style="list-style-type: none"> <li>Initially a voluntary agreement between government and electricity &amp; gas suppliers</li> <li>Now being replaced by the Warm Home Discount scheme</li> <li>Currently applies to ~10% of households</li> </ul>	Warm Home Discount <ul style="list-style-type: none"> <li>a once per year winter discount</li> <li>£140 in 2014/15</li> </ul>	~1% (incl both gas and electr)

# California

- ▶ Regulatory control by the California Public Utilities Commission
- ▶ Oversight by the Low Income Governing Board
- ▶ Statutory “public purpose program (PPP)” surcharge which funds:
  - ▶ CARE (California Alternate Rates for Energy) and
  - ▶ ESA (Energy Savings Assistance) programmes
- ▶ Goals of 100% eligible households reached by ESA by 2020, and 90+% penetration for CARE
- ▶ Large, multi-year, multi-\$B programme

# CARE programme

- ▶ Approx one-third of California households qualify
- ▶ Eligibility is largely income based, and varies according to number of people in household
  - ▶ Supplementary programme (FERA – Family Electric Rate Assistance) provides some support just above the eligibility boundary
- ▶ Minimum 20% discount on electricity/gas – some utilities are higher
- ▶ CARE customers do not pay the PPP surcharge
- ▶ Businesses also pay a PPP surcharge

# Example: Southern California Edison

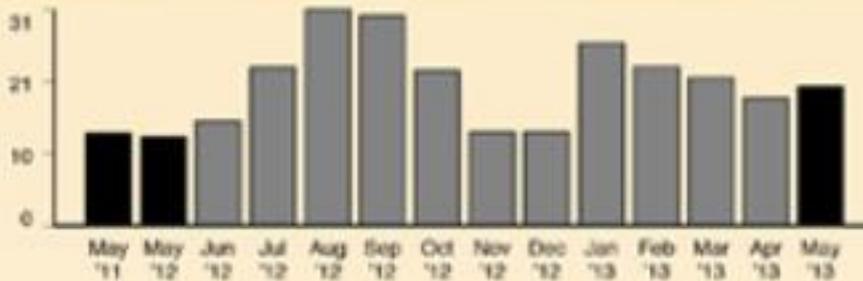
## Your daily average electricity usage (kWh)

2 Years ago: 13.32

Last year: 12.72

This year: 19.90

4



**Your monthly usage may be higher than usual...**  
Based on your historical usage pattern, your monthly usage is trending higher than normal. As a result, you may notice an increase in your bill. If you would like information on tips and programs that can help you lower your energy usage and your bill, please visit [www.sce.com/billhelper](http://www.sce.com/billhelper).

## Details of your new charges

Your rate: DOMESTIC

Billing period: Apr 23 '13 to May 22 '13 (29 days)

### Delivery charges

Basic charge	29 days x \$0.03000	\$0.87
Energy-Winter		
Tier 1 (within baseline)	313 kWh x \$0.03960	\$12.39
Tier 2 (up to 30%)	94 kWh x \$0.07087	\$6.66
Tier 3 (31% to 100%)	170 kWh x \$0.18204	\$30.95
DWR bond charge	577 kWh x \$0.00493	\$2.84

### Your Delivery charges include:

- \$6.52 transmission charges
- \$43.22 distribution charges
- \$0.08 nuclear decommissioning charges
- -\$7.93 conservation incentive adjustment

### Generation charges

DWR		
DWR energy credit	577 kWh x -\$0.00097	-\$0.56
SCE		
Energy-Winter		
Tier 1 (within baseline)	313 kWh x \$0.08493	\$26.58
Tier 2 (up to 30%)	94 kWh x \$0.08493	\$7.98
Tier 3 (31% to 100%)	170 kWh x \$0.08493	\$14.44

- \$7.59 public purpose programs charge
- \$1.25 new system generation charge

### Your Generation charges include:

- \$0.72 competition transition charge

### Subtotal of your new charges

Los Angeles Co UUT	\$102.15 x 4.50000%	\$4.60
State tax	577 kWh x \$0.00029	\$0.17

### Your overall energy charges include:

- \$0.93 franchise fees

### Your new charges

**\$106.92**

### Additional information:

- Service voltage: 240 volts
- Your winter baseline allowance: 313.0 kWh

# Comparison between California and New Zealand

California	New Zealand
Policy recognises that affordable access to energy is a necessary social good for all	'Universality' policy dropped from final 2011 NZ Energy Strategy
Policy has clear goals and timelines for both CARE and ESA	Loose objectives around warm homes; no goals or timelines
CARE is targeted, with an intermediate step	Low user tariffs are poorly targeted
CARE is integrated with progressive tariffs	Debate to date has not considered desirability of supplementary actions
Policy is informed by rich data and analysis	Generally poor database to inform policy
PPP surcharge is on top of relatively low tariffs for electricity and gas	Higher baseline tariff rates
CARE is integrated with other programmes	Few programmes to integrate with; integration is often poor

# Conclusions

- ▶ Social tariffs are targeted towards vulnerable households
- ▶ They are part of the policy mix – not a sole response
- ▶ Require a regulatory framework with strong oversight
- ▶ Issues for application in NZ:
  - ▶ Acceptance – political and public
    - ▶ Source of funding – from other consumers
    - ▶ Targeted ‘subsidy’ versus across the board measures
    - ▶ Eligibility boundaries and regressive effects
  - ▶ Effectiveness and opportunity cost of this particular option