Shell Future Energy Presentation

Prepared for: Shell Singapore

Prepared by: Ipsos Perth, Australia

Anna Eden: Director

anna.eden@ipsos.com

Madeleine Russell: Research Executive

madeleine.russell@ipsos.com

+61 8 9321 5415

29.04.13

Background

How we conducted the Study:

- We employed an online methodology, interviewing n = 401 people in Singapore.
- Data was collected between the 11th – 21st March.
- Quotas were in place to ensure the sample collected is an accurate reflection of the gender, age and ethnicity demographics of the population. Data has been weighted at an age, gender and ethnicity level to ensure sample representativeness.
- Significant differences between demographic sub-groups are at the 95% confidence interval and have been depicted as follows:
  - e.g. ⬆ 18-30 In this instance, the arrow indicates a significant difference to 18-30 year olds. This logic has been applied throughout.

Full details in appendix

Key Findings: What Did We Learn?

A total of 4 in 5 Singapore residents rate future energy needs as an important issue.

Future energy needs is just one of the issues rated as important – aspects to do with finances, public health and education systems and infrastructure/transport are also considered important.

Important Issues

1. Cost of living – 88%
2. Employment /job security – 86%
3. Housing affordability – 86%
4. Retirement savings – 86%
5. Public health system – 85%
6. Infrastructure/transportation – 81%
7. Future energy needs – 80%
8. Public education system – 79%
9. Improved living standards – 78%
10. Economic growth – 77%

Housing prices increased rapidly over the last few years and is becoming unaffordable, especially for low income wage earners.

Health care needs are rapidly increasing due to a rise in ageing population and chronic illness. Cost of care in Singapore has been consistently increasing with high private and out-of-pocket expenditure.

Financial focus in line with:

- 3-point increase in the number of consumers who are likely to hold back on spending over the next 12 months (64%)
- A 4% increase in the number of consumers who feel their future job prospects would not be good (49%) from Q3.
- 10% reporting to have no spare cash in Q4, an increase of 3% from the preceding quarter.

Numbers reported are Top 3% (8-10).

Q4. How do you rate each of the following issues on a scale of 0 to 10, where 0 means you think it **is not an important issue** and 10 means you think it **is an important issue**? n = 401

Important Issues

Future energy needs

Thailand
92%

Singapore
80%

Australia
71%

Vietnam
70%

Numbers reported are Top 3% (8-10).

Q4. How do you rate each of the following issues on a scale of 0 to 10, where 0 means you think it **is not an important issue** and 10 means you think it **is an important issue**? (Singapore n=401; Australia, n=1049; Vietnam n=600; Thailand n= 400)

In line with high financial concern, higher energy prices are perceived as having the biggest impact on Singapore.

Expected Impact in the Context of an Energy Constrained World

Significantly higher energy prices - 79%

Energy shortages - 75%

Water shortages - 72%

Food shortages - 64%

Higher unemployment - 60%

Geopolitical Instability- 57%

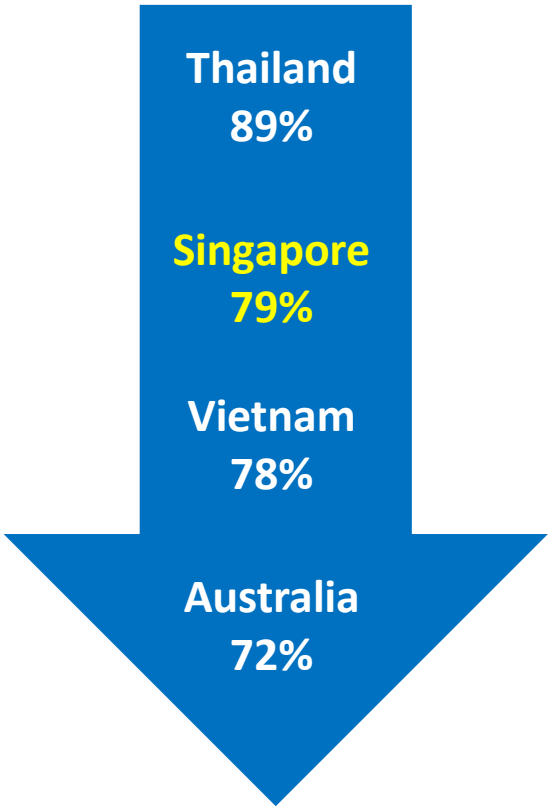
	Males	Females
Higher energy prices	85%	73%

Numbers reported are Top 3% (8-10).

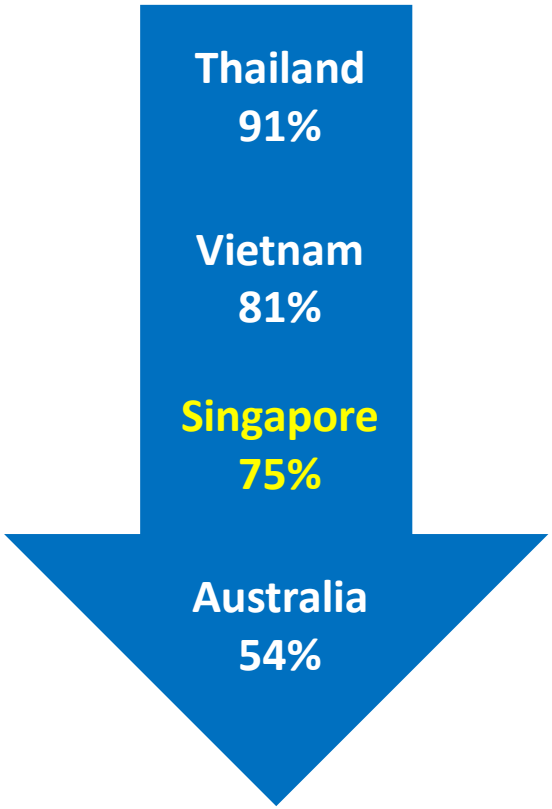
Q9. In an energy constrained world, what do you think is the likely impact of the following issues on Singapore? Please provide a rating from 0-10, where 0 is not at all impactful and 10 is highly impactful. n = 401

Expected Impact in the Context of an Energy Constrained World

Significantly higher energy prices



Energy shortages



Numbers reported are Top 3% (8-10).

Q9. In an energy constrained world, what do you think is the likely impact of the following issues on Singapore? Please provide a rating from 0-10, where 0 is not at all impactful and 10 is highly impactful. (Singapore n=401; Australia, n=1049; Vietnam n=600; Thailand n= 400)

Expected Impact in the Context of an Energy Constrained World

	Singapore	Vietnam	Thailand	Australia
Higher energy prices	1 79%	78%	2 89%	1 72%
Energy shortages	2 75%	81%	1 91%	3 54%
Water shortages	3 72%	1 89%	3 87%	2 59%
Food shortages	64%	2 86%	80%	45%
Higher unemployment	60%	2 86%	79%	48%
Geopolitical instability	57%	68%	74%	37%

Numbers reported are Top 3% (8-10).

Q9. In an energy constrained world, what do you think is the likely impact of the following issues on Singapore? Please provide a rating from 0-10, where 0 is not at all impactful and 10 is highly impactful. n = 401

We see cost dominate mind space when Singapore residents are asked to indicate the most important issue in regards to future energy.

Most Important Issue In Regards to Future Energy

1. Cost – 28%
2. Environment – 24%
3. Climate change – 21%
4. Ensuring supply meets demand – 20%
5. Employment and economic growth – 6%
6. No concern/ interest – 1%

In the last quarter of 2012, 63% of Singapore consumers reported changing their spending habits to save on household expenses. Top 3 areas of cut back include:

1. New clothes (55%)
2. Buying cheaper grocery brands (47%)
3. **Saving on utilities (47%)**

• Also in line with 1/3 indicating they believe the country is in recession, stable since Q3 2012.

Numbers reported are Top 3% (8-10).

Q11. What is the most important issue for you when thinking about future energy? n = 401

Most Important Issue In Regards to Future Energy

	Singapore	Vietnam	Thailand	Australia
Cost	28%	12%	19%	36%
Environment	24%	27%	40%	23%
Climate change	21%	33%	19%	13%
Ensuring supply meets demand	20%	17%	5%	18%
Employment & economic growth	6%	9%	14%	6%
No concern/interest	1%	2%	0%	2%

Shared importance

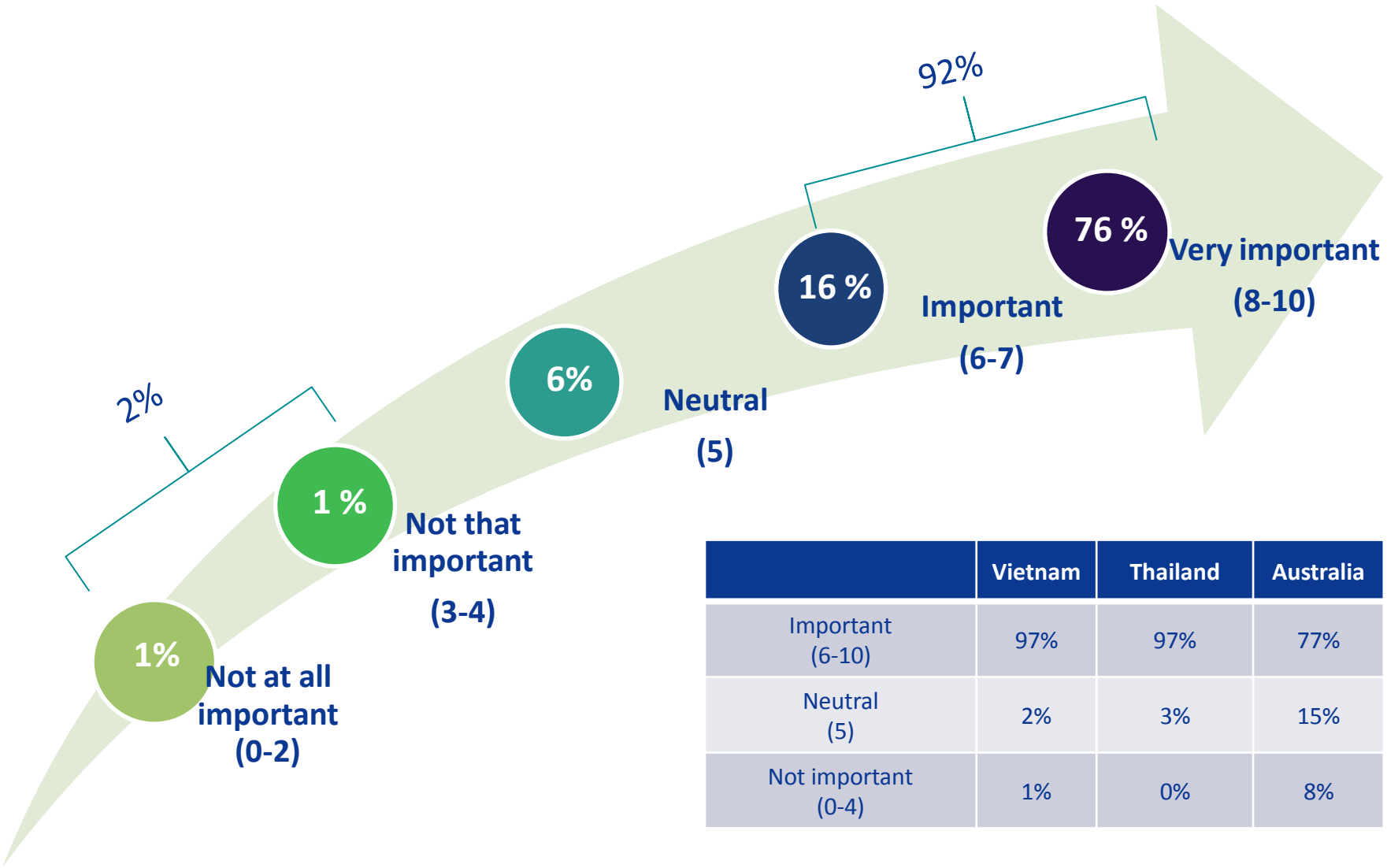
Primary importance

Numbers reported are Top 3% (8-10).

Q11. What is the most important issue for you when thinking about future energy? n = 401

In line with Vietnam and Thailand, the vast majority of Singapore residents feel it is very important to reduce CO_2 emissions.

Perceived Importance in Reducing Co2 Emissions



	Vietnam	Thailand	Australia
Important (6-10)	97%	97%	77%
Neutral (5)	2%	3%	15%
Not important (0-4)	1%	0%	8%

Q8a. Every time we burn fossil fuels such as gas, coal or oil, carbon dioxide (Co2) is released into the atmosphere. How important do you feel it is to reduce Co2 emissions? n = 401

Perceived Importance in Reducing CO_2 Emissions : In the Words of Residents…

"Less emission means cleaner environment, better health conditions & lesser pollution."

"It will increase global warming affecting generations later."

"Not really sure about this."

"Singapore is a small country with growing population. Already too much pollution and respiratory diseases are high - so we need to reduce co2 release."

"Singapore don't use as much fossil fuels as other countries."

Rating of high importance

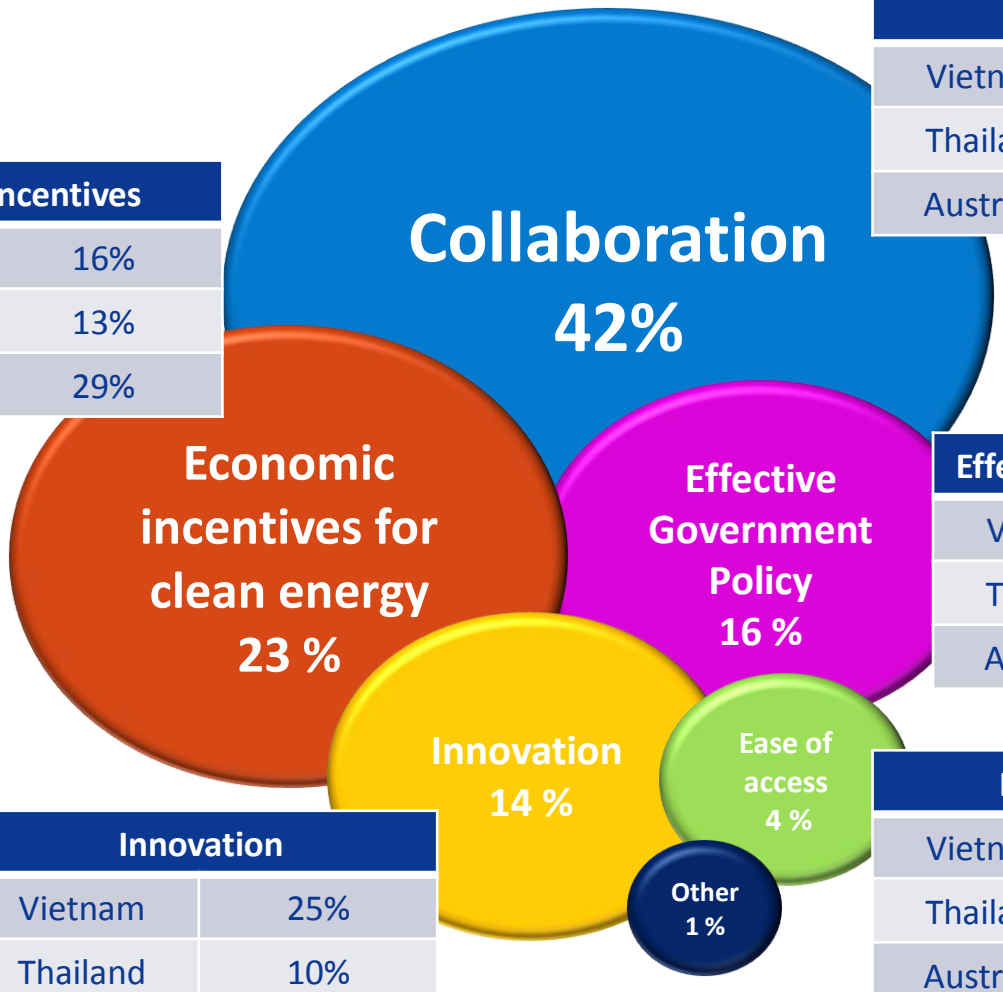
Rating of neutral importance

Q8b. Why do you say that?

Around 2 in 5 Singapore residents believe collaboration is the most important factor in building future energy solutions

… and without doubt, most believe government has the biggest role in doing this – industry and general public are also seen to have a big role amongst 2 in 5 Singapore residents.

Most Important Factors in Building Future Energy Solutions



Economic Incentives	
Vietnam	16%
Thailand	13%
Australia	29%

Collaboration	
Vietnam	41%
Thailand	46%
Australia	37%

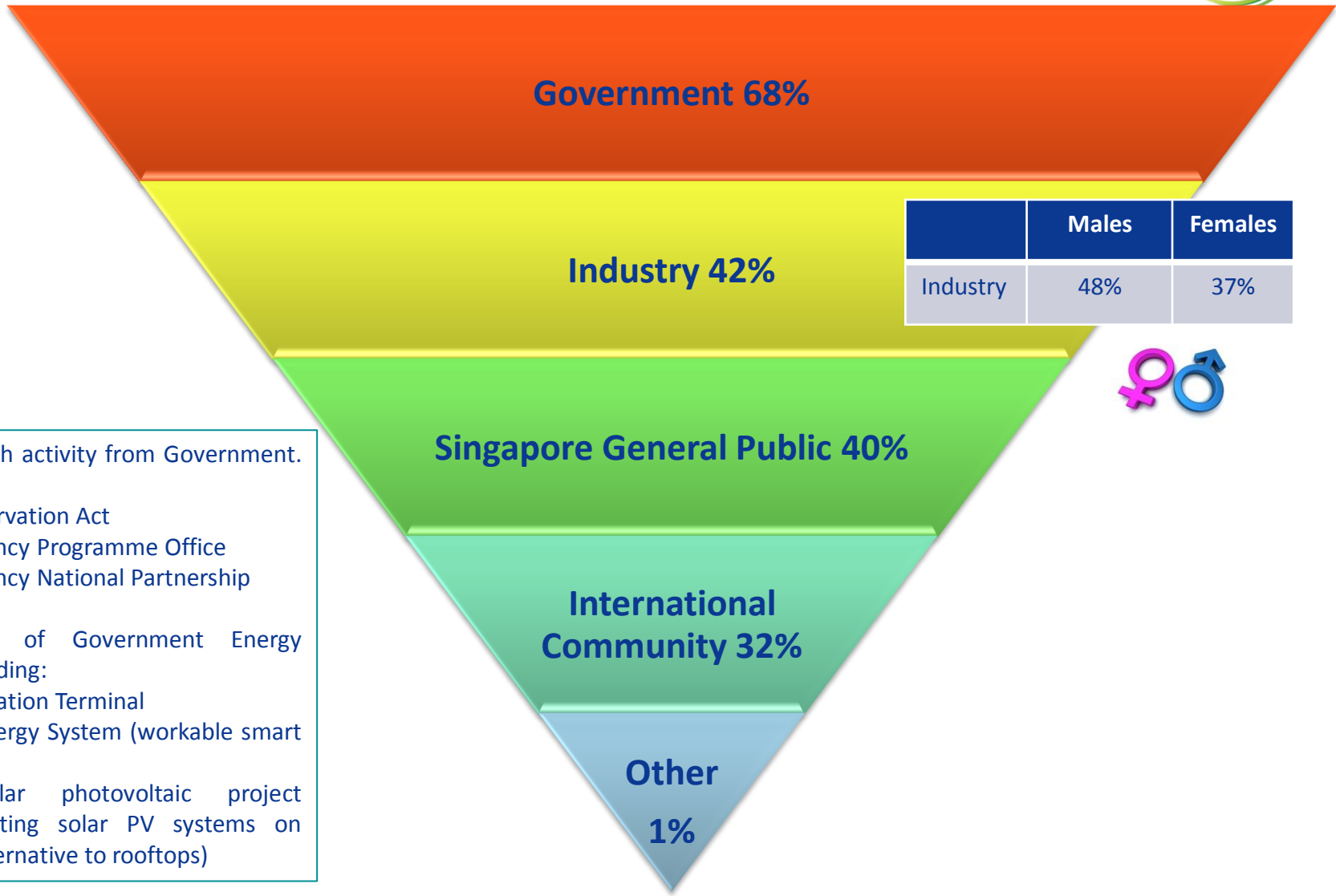
Effective government policy	
Vietnam	17%
Thailand	18%
Australia	4%

Innovation	
Vietnam	25%
Thailand	10%
Australia	17%

Ease of Access	
Vietnam	1%
Thailand	12%
Australia	10%

Q6. What do you believe is the most important factor in building energy solutions? n = 401

Responsibility for Playing the Biggest Role in Creating a Better Energy Future



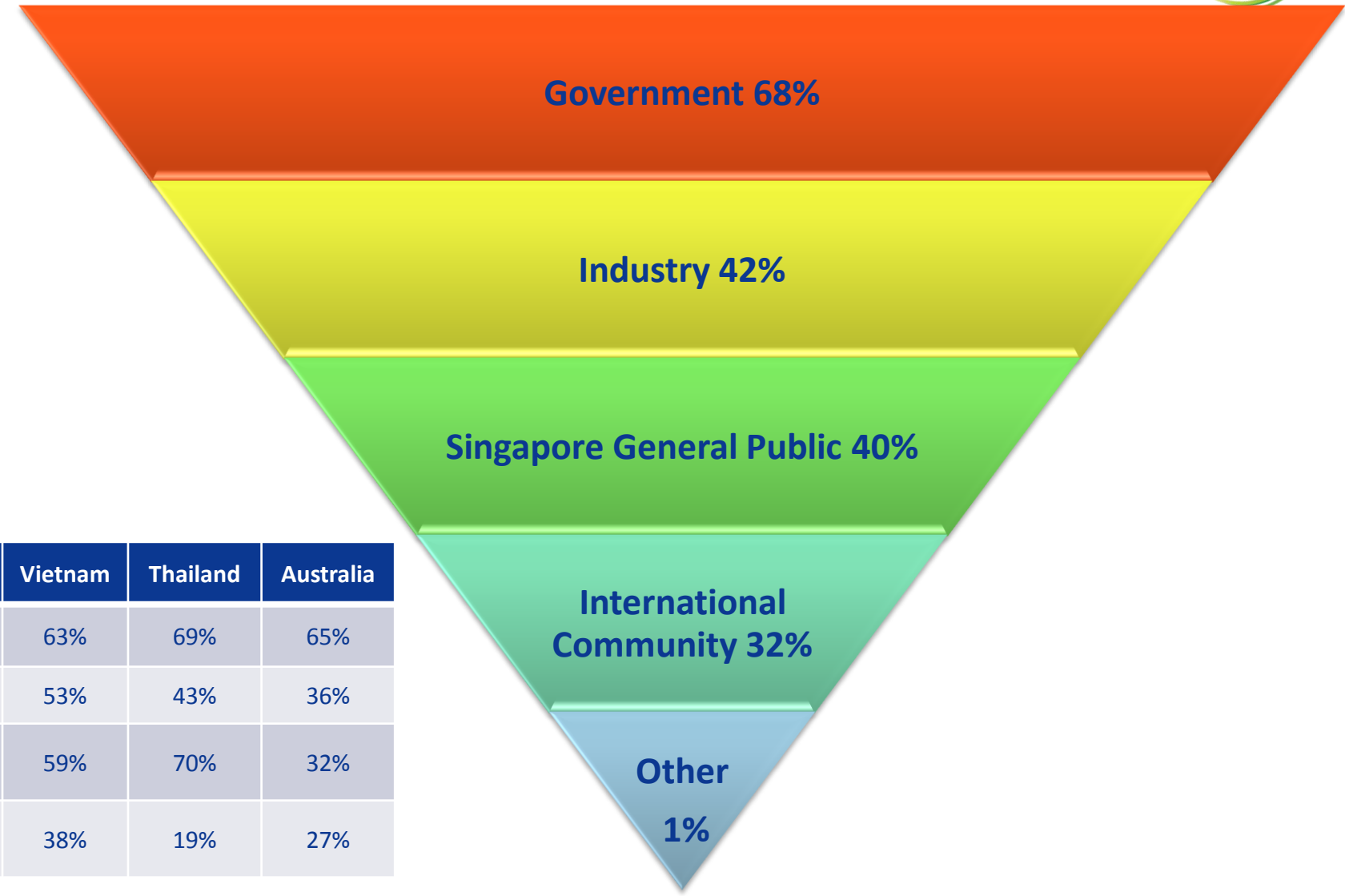
	Males	Females
Industry	48%	37%

In line with high activity from Government. For example:
- Energy Conservation Act
- Energy Efficiency Programme Office
- Energy Efficiency National Partnership

Other Whole of Government Energy initiatives including:
- LNG Regasification Terminal
- Intelligent Energy System (workable smart grid solutions)
- Floating solar photovoltaic project (installing floating solar PV systems on water as an alternative to rooftops)

Q7. Who do you think has the biggest role to play in creating a better energy future? n = 401

Responsibility for Playing the Biggest Role in Creating a Better Energy Future

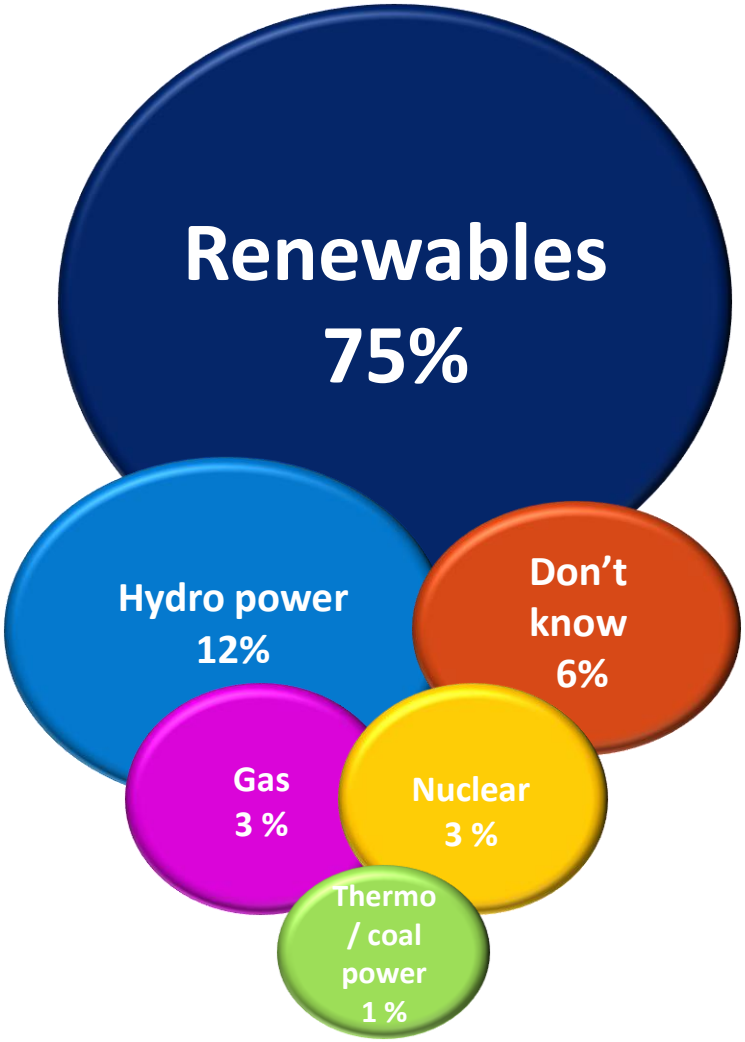


	Vietnam	Thailand	Australia
Govt	63%	69%	65%
Industry	53%	43%	36%
General Public	59%	70%	32%
Int'l Community	38%	19%	27%

Q7. Who do you think has the biggest role to play in creating a better energy future? n = 401

By far, the majority of Singapore residents believe renewables is the cleanest method of power generation.

Cleanest Method of Power Generation



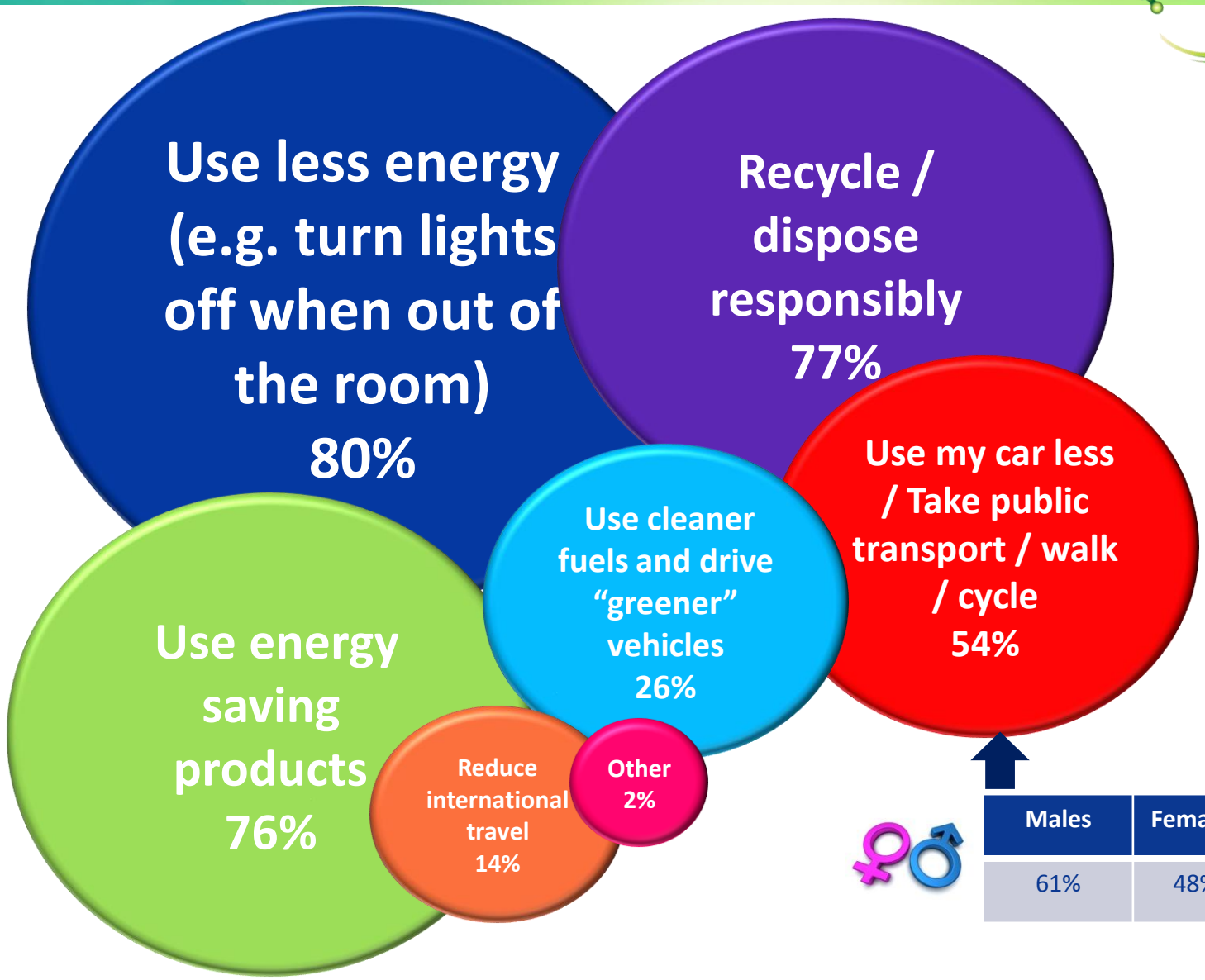
	Males	Females
Don't know	3%	10%

Q12. Which method/way of power generation is the cleanest (i.e. has the lowest CO2 emission) in your opinion? n = 401

We see multiple behaviours engaged in to reduced CO_2 emissions.

When it comes to selecting fuel for the car environmental and financial benefits dominate.

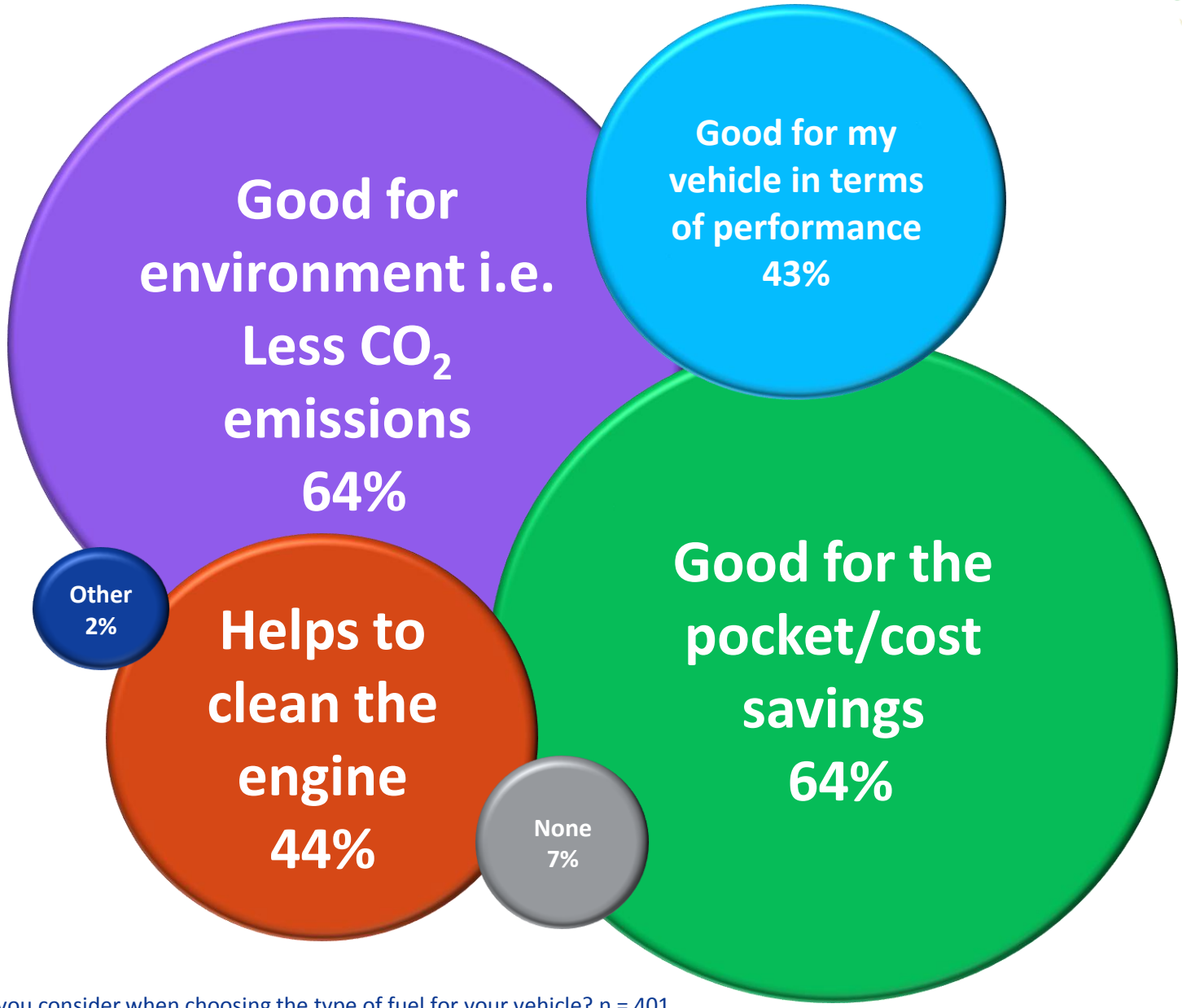
Personal Behaviours to Reduce Co2 Emissions



Males	Females
61%	48%

Q15. What do you do personally to reduce Co2 emissions? n = 401

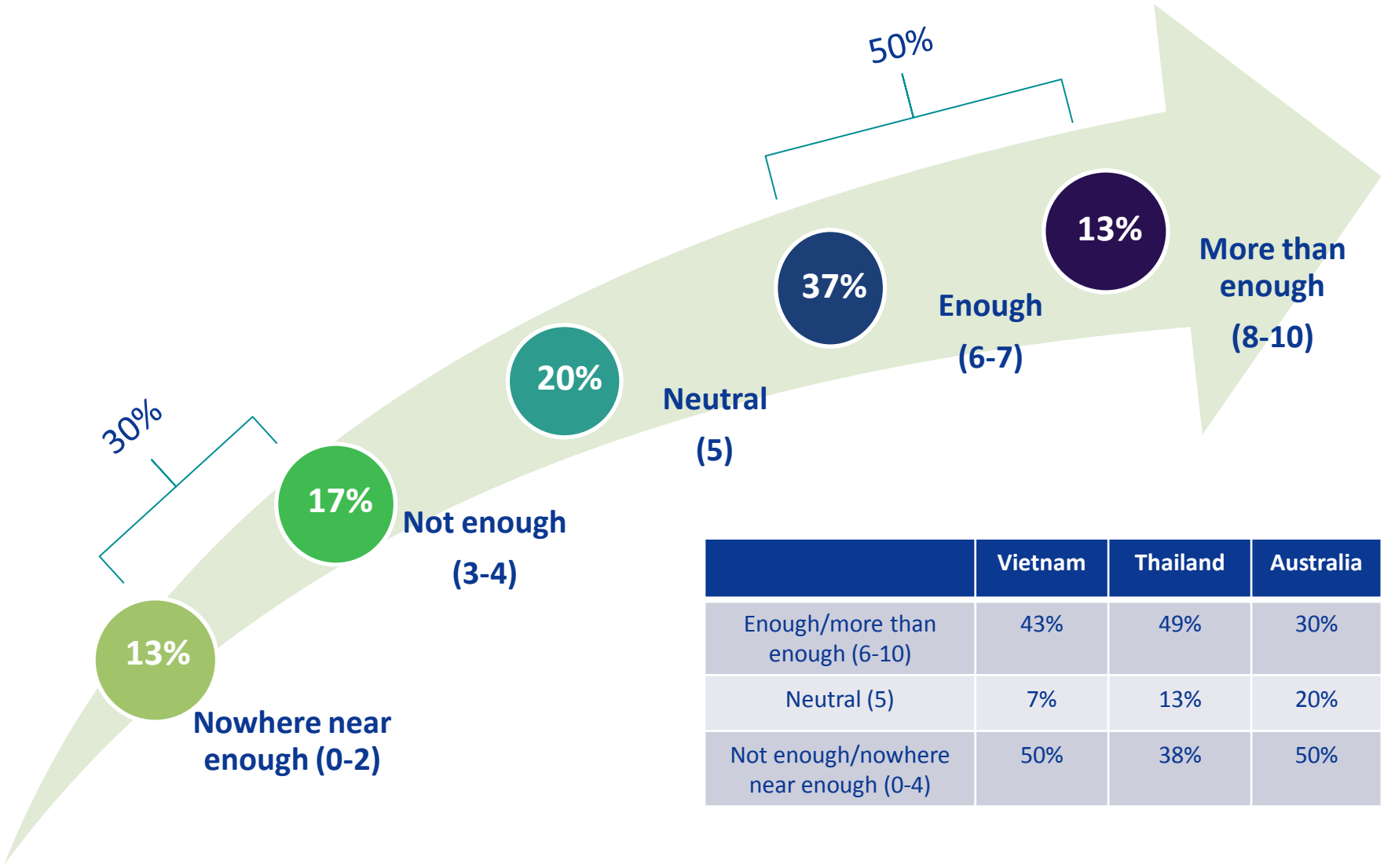
Factors Under Consideration When Choosing Type of Fuel For Vehicle



Q16. What factors do you consider when choosing the type of fuel for your vehicle? n = 401

Half of Singapore residents think the energy industry is currently doing enough to address future energy needs – just under a third do not.

Perceived Efforts of Energy Industry in Addressing Future Energy Needs



	Vietnam	Thailand	Australia
Enough/more than enough (6-10)	43%	49%	30%
Neutral (5)	7%	13%	20%
Not enough/nowhere near enough (0-4)	50%	38%	50%

Q10. Do you think the energy industry is currently doing enough to address future energy needs? n = 401

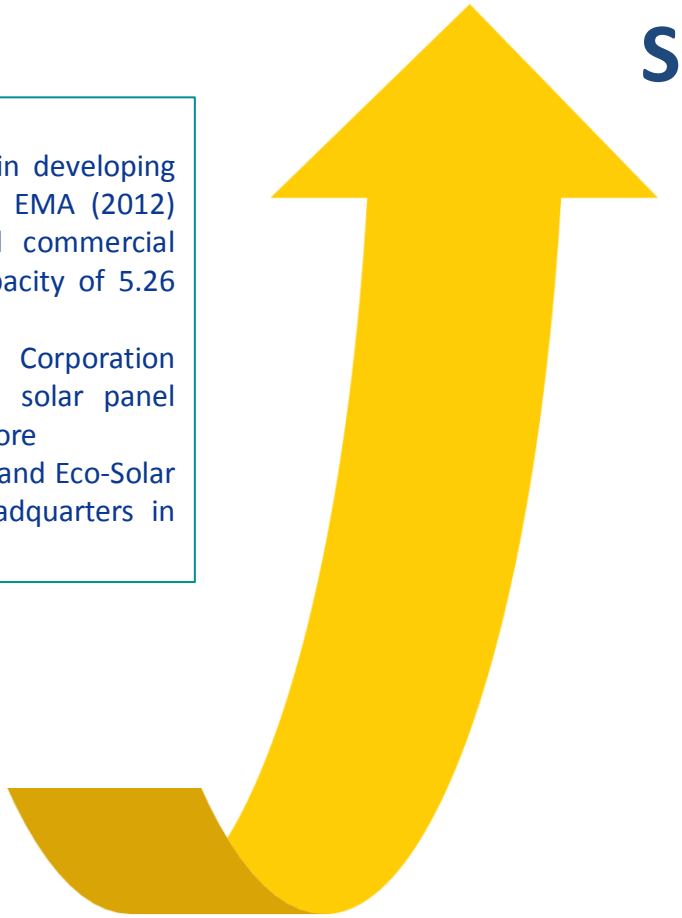
Solar energy is the most desired source to derive energy from in the future…

On a secondary level, natural gas, wind power, hydro energy and bio fuels are also desired sources.

Desired Sources to Derive Energy

High rating of solar, in line with:

- The government's investment in developing the solar industry. According to EMA (2012) there were 120 grid-connected commercial solar PV installations with a capacity of 5.26 megawatts.
- Norway's Renewable Energy Corporation establishing the world's largest solar panel manufacturing complex in Singapore
- Companies Solar Energy Power and Eco-Solar setting up their Asia-Pacific headquarters in Singapore.



Solar Energy - 86%

Natural Gas - 52%

Wind Power - 47%

Hydro Energy - 42%

Bio-fuels - 40%

Wave Power - 29%

Oil from Fossil Fuels - 17%

Coal - 8%

Other - 3%

Q5. It is predicted there will be 9 billion people (world-wide) in 2050, putting a serious strain on global resources. With this in mind, where do you think Singapore should get its energy from? n = 401

Desired Sources to Derive Energy

Multiple sources have a higher level of desirability amongst males

	Males	Females
Solar energy	91%	81%
Wind Power	54%	41%
Bio-fuels	48%	31%
Wave Power	36%	21%
Oil from fossil fuels	22%	13%

★Solar Energy - 86%

Natural Gas - 52%

★Wind Power - 47%

Hydro Energy - 42%

★Bio-fuels - 40%

★Wave Power - 29%

★Oil from Fossil Fuels - 17%

Coal - 8%

Other - 3%

Q5. It is predicted there will be 9 billion people (world-wide) in 2050, putting a serious strain on global resources. With this in mind, where do you think Singapore should get its energy from? n = 401

Desired Sources to Derive Energy

	Vietnam	Thailand	Australia
Solar energy	72%	83%	87%
Natural gas	18%	35%	42%
Wind power	47%	50%	70%
Hydro energy	58%	54%	43%
Bio-fuels	40%	35%	28%
Wave power	12%	21%	41%
Oil from fossil fuels	20%	18%	8%
Coal	23%	8%	12%

Solar Energy - 86%

Natural Gas - 52%

Wind Power - 47%

Hydro Energy - 42%

Bio-fuels - 40%

Wave Power - 29%

Oil from Fossil Fuels - 17%

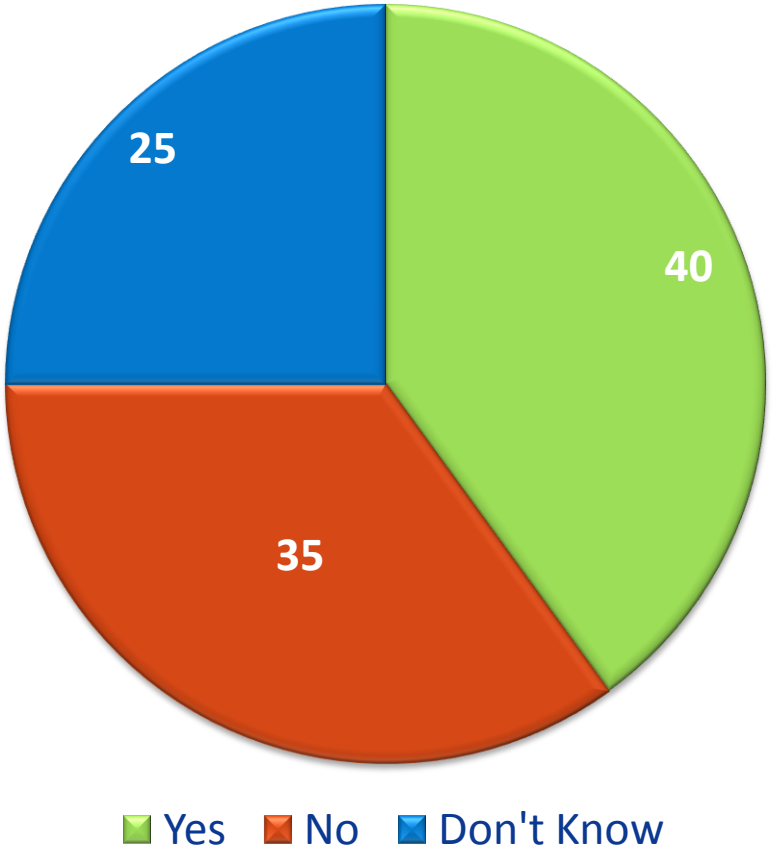
Coal - 8%

Other - 3%

Q5. It is predicted there will be 9 billion people (world-wide) in 2050, putting a serious strain on global resources. With this in mind, where do you think Singapore should get its energy from? n = 401

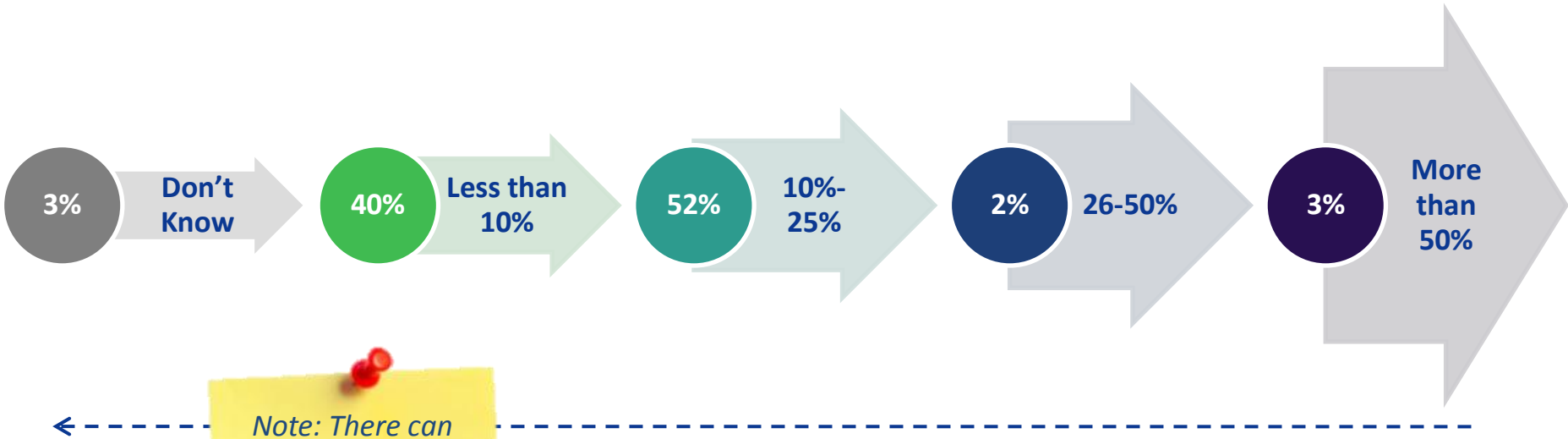
Les than half of Singapore residents state they would be willing to pay more for cleaner power/electricity – of those willing to pay, half state they would be willing to pay between 10-25% more.

Willingness to Pay More for Cleaner Power/Electricity



Q13. Are you willing to pay more for cleaner power/electricity? n = 401

Level More Willing to Pay for Cleaner Energy



Note: There can often be a discrepancy between self reported attitudes and behaviour.

	Males	Females
> 50%	6%	0%

Q14. How much more are you willing to pay for cleaner energy? n = 163

Detailed Findings: Age Comparisons

Importance of future energy needs cuts across all ages – ratings of importance do not meaningfully differ as a function of age.

Dashboard: Important Issues

	18-30 years	31-40 years	41-50 years	51-60 years
Cost of living	87%	90%	87%	91%
Employment / job security	87%	84%	83%	91%
Housing affordability	85%	86%	83%	90%
Retirement savings	84%	85%	84%	92%
Public health system	83%	85%	83%	91%
Infrastructure/transportation	78%	77%	83%	86%
Future Energy Needs	81%	77%	78%	84%
Public education system	78%	77%	80%	79%
Improved living standards	78%	77%	79%	78%
Economy growth	71%	76%	78%	81%

Numbers reported are Top 3% (8-10).

Q4. How do you rate each of the following issues on a scale of 0 to 10, where 0 means you think it **is not an important issue** and 10 means you think it **is an important issue**? n = 401

⬆ Significantly higher at 95% confidence interval

But we see desired sources to derive energy differ by age. Desire to use hydro energy is higher in youngest residents compared to older residents. Conversely, desire to derive energy via solar is higher amongst older residents.

Dashboard:
Desired Sources to Derive Energy

	18-30 years	31-40 years	41-50 years	51-60 years
Solar Energy	77%	86%	90% ↑ 18-30	89% ↑ 18-30
Natural Gas	55%	43%	58% ↑ 31-40	49%
Wind Power	49%	45%	47%	50%
Hydro Energy	47% ↑ 51-60	45%	41%	32%
Bio-fuels	40%	37%	41%	41%
Wave Power	32%	27%	25%	31%
Oil from fossil fuels	22%	14%	20%	12%
Coal	12%	9%	7%	6%
Other	0%	2%	6%	5%

Numbers reported are % scores.

Q5. It is predicted that there will be 9 billion people (world-wide) in 2050, putting a serious strain on global resources. With this in mind, where do you think Singapore should get its energy from? n = 401

↑ Significantly higher at 95% confidence interval

Younger residents believe innovation and economic incentives for clean energy are the most important factors in building future energy solutions – older residents are more likely to think effective government is most important.

Dashboard:
Most Important Factor in Building Future Energy Solutions

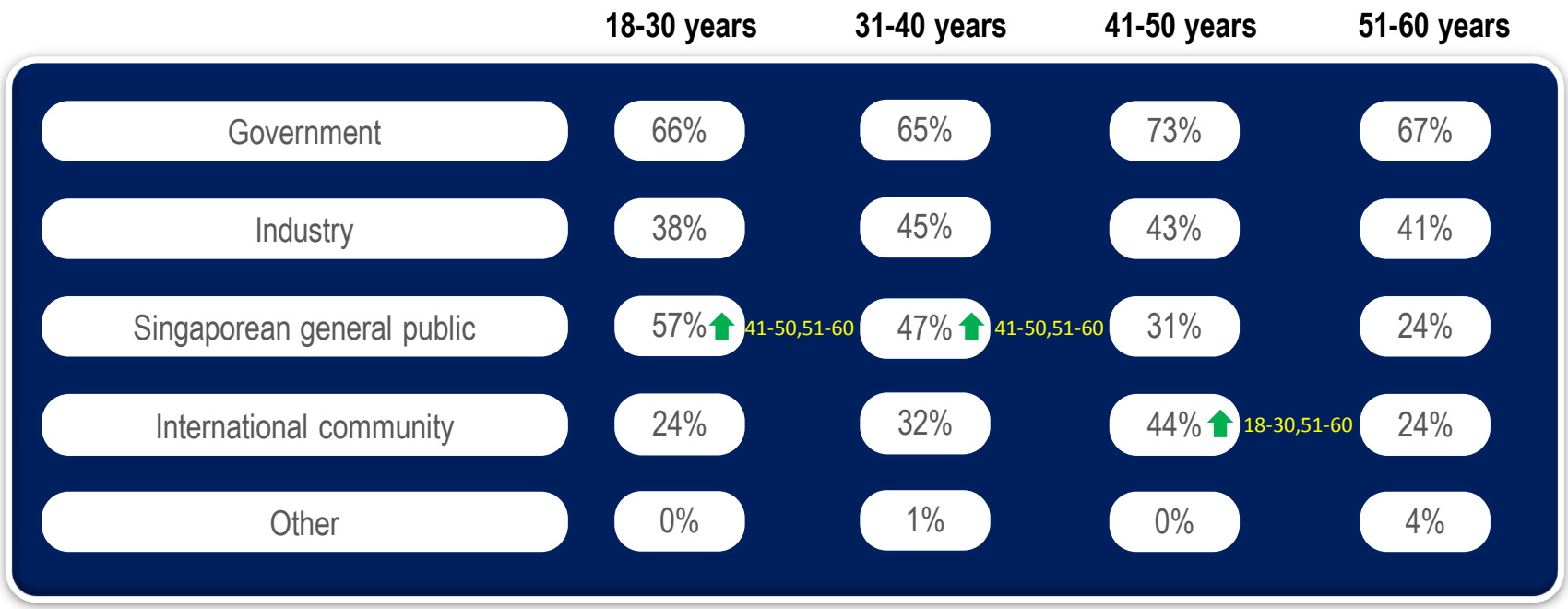
Numbers reported are % scores.

Q6. What do you believe is the most important factor in building future energy solutions? n = 401

↑ Significantly higher at 95% confidence interval

And collective responsibility is higher amongst younger residents.

Dashboard:
Responsibility for Playing the Biggest Role in Creating a Better Energy Future



Numbers reported are % scores.

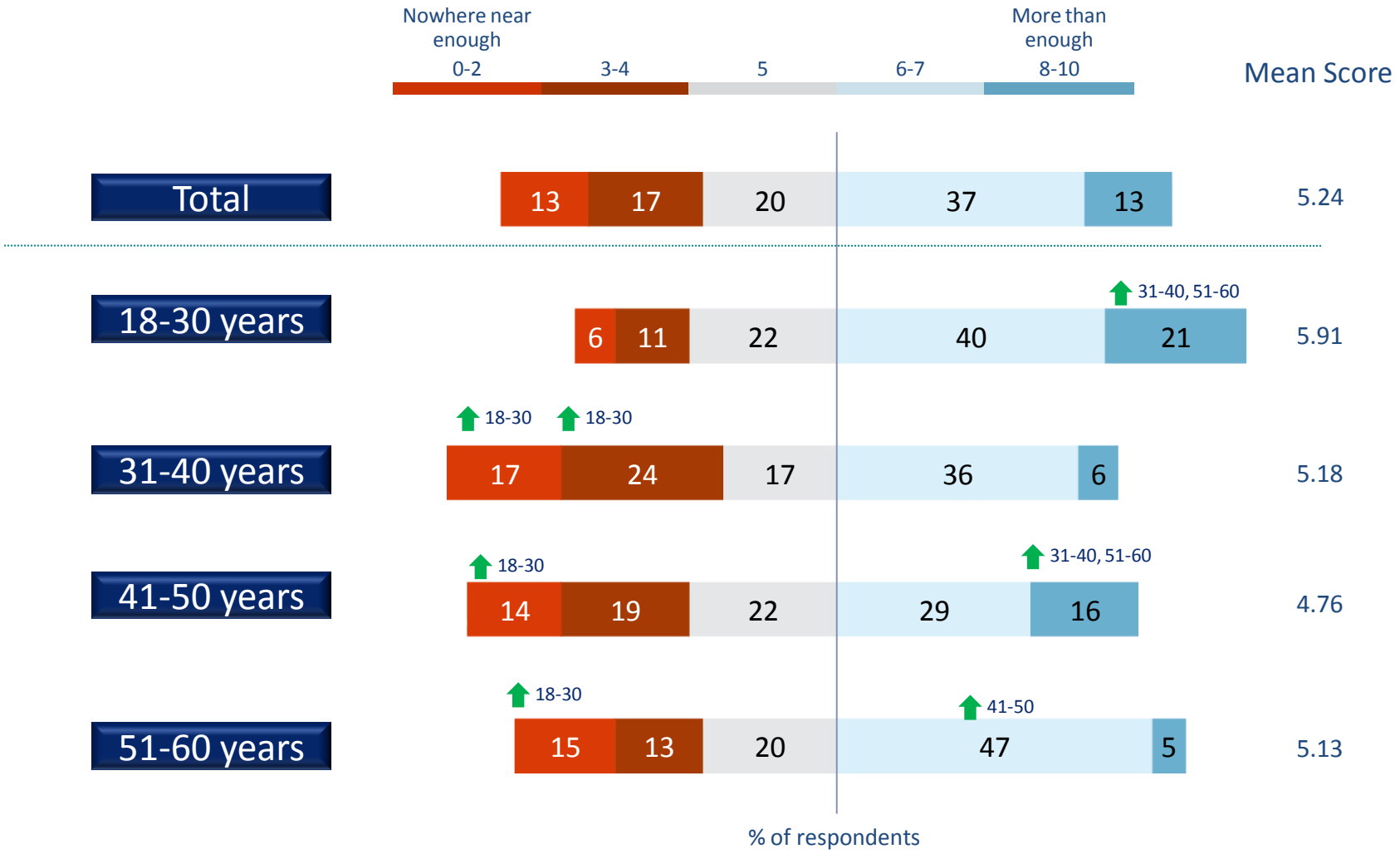
Q7. Who do you think has the biggest role to play in creating a better energy future? n = 401

Significantly higher at 95% confidence interval

Older residents are more inclined to believe the energy industry is not doing enough to address future energy.

Younger residents are more likely to think enough is being done- perhaps tied to the fact they have a higher level of collective responsibility for the issue.

Dashboard:
Perceived Efforts of Energy Industry in Addressing Future Energy Needs



Q10. Do you think the energy industry is currently doing enough to address future energy needs?
n = 401

Significantly higher at 95% confidence interval

Older residents are more likely to report a bigger repertoire of personal behaviours to reduce Co2 emissions.

Dashboard:
Personal Behaviours to Reduce Co2 Emissions

	18-30 years	31-40 years	41-50 years	51-60 years
Use less energy	74%	75%	82%	90% ↑ 18-30,31-40
Recycle/dispose responsibly	66%	75%	78% ↑ 18-30	91% ↑ 18-30,31-40, 41-50
Use energy saving products	70%	73%	78%	81%
Use my car less/Take public transport/walk/cycle	49%	53%	52%	67% ↑ 18-30, 41-50
Use cleaner fuels and drive "greener" vehicles	22%	28%	29%	24%
Reduce international travel	11%	18%	11%	15%
Other	2%	2%	2%	1%

Numbers reported are % scores.

Q15. What do you do personally to reduce C02 emissions? n = 401

↑ Significantly higher at 95% confidence interval

Thank you!

Questions?

Shell Future Energy Presentation

Prepared for: Shell Singapore

Prepared by: Ipsos Perth, Australia

Anna Eden: Director

anna.eden@ipsos.com

Madeleine Russell: Research Executive

madeleine.russell@ipsos.com

+61 8 9321 5415

29.04.13

Demographics

Demographic brackets	Percentage represented in data
Male	49%
Female	51%
18-25 years	12%
26-30 years	12%
31-35 years	12%
36-40 years	13%
41-45 years	14%
46-50 years	17%
51-55 years	10%
56-60 years	10%
Chinese	74%
Malay	13%
Indian	9%
Other	4%
n =	*401*

Q2. Into which age group do you fit?
Q3. Please indicate your gender.
Q3a. Please indicate your ethnicity.
(Weighted Statistics)