or so by government and supranational organizations (such as the European Commission) and academic discourse, has been rarely accompanied by discussion or explanation of the notions which underpin its meaning. Of the limited discussion that has ensued, it has been more peripheral than center stage and often the meaning attributed has been more implicit than explicitly stated“ (Chester 2010)

Obscurity of notion, or, more precisely, a variety of perceptions triggered array of attempts to describe what energy security means. For instance, the author of above provided citation claims that he intends to deliver "a contribution to redressing this gap in the literature about the conceptualization of energy security“ (Chester 2010). The author, in principle, joins the discussion "by providing dimensions, which are "prioritized by the narrower market-centric and broader multi-dimensional definitions“ (Chester 2010) as well as the endeavors to quantitatively measure energy security (Chester 2010). In Table 1 dimensions distinguished by the author are provided.

Table 1. Dimensions prioritized in the energy security definitions and quantitative measures.

Dimensions of energy security	Market-centric definitions	Quantitative measurement	Broader definitions
Absolute:			
Availability	✓	✓	✓
Adequacy of capacity		✓	✓
Relative:			
Affordability			✓
Sustainability			✓

Source: Chester 2010

After providing the facets of energy security, the author admits that the term "energy security“ can be used in very different contexts. Those contexts or multiple aspects of the term "energy security" as perceived by the author, are as follows:

§Energy security is about the management of risk(s);

§Energy security can refer to energy use 'mix', abundance of local resources, and/or the reliance on imports;

§Energy security is a concept, not a policy, with strategic intent;

§Policies are implemented to improve energy security;

§Energy security can hold a temporal dimension;

§Energy security will differ between across energy markets;

§Energy security will differ between energy market stakeholders.

Source: Chester 2010

The paper cited above expresses the approach, which we support and adopt. **We similarly claim that "energy security" notion is indefinable as it is the *context sensitive perception.*** To put it into another way, we believe that perception of energy security changes and obtains different sense for different interested parties. Despite the above cited author claims that notion of "energy security" is nebulous, we have to admit that it becomes more explicit when a context is indicated.

A separate stream of scientific literature is devoted to elaboration of energy security issues in the context of sustainable development. Taking into account that indicated approach deserves special scrutinization, here we just mention that dimensions of energy security by authors are incorporated into conventional or accomplished sustainable development framework. E.g. like authors of the paper named "Energy sustainability from analysis of sustainable development indicators: a case study in Taiwan“ start elaboration of energy sustainability issue from lances of *ad hoc* shaped sustainable development, which is provided in Figure 1.

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CONTEMPORARY PERCEPTIONS OF ENERGY SECURITY: POLICY IMPLICATIONS

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Abstract. This paper is devoted to tracing contemporary perceptions of energy security. Energy security, as a concept started its evolution from a point, where it was identified with secure oil provision for countries, which did not possess energetic resources and were increasingly dependent on oil imports. Gradually, the concept of energy security started to be repeatedly used in the scientific papers, popular press and media and even colloquial language. Energy security has become an argument in making political decisions. Nevertheless, despite the exaggerated attention to energy security, still there is no unanimous agreement on what the concept of energy security means, what facets it embraces and, consequently, how it could be measured and controlled. The paper aims to distinguish the main perceptions of energy security and foresee plausible implications of one or another approach adopted.

Keywords: energy security, sustainable energy, energy metrics, energy dimensions

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JEL Classifications: 013, 018, O33, O44.

1. Introducing recent discussion: dimensions of an assessment of energy security

The aim of this paper is to review the most recent scientific literature in order to reveal similarities and differences in contemporary energy perceptions expressed by various authors. Setting boundaries for prevailing treatments and classification of the most resent understandings of energy security is seen as an outcome of this scientific research. In order to catch the latest tendencies of energy security treatments, it was decided to rely mainly on the latest scientific papers, which are included into Science Direct database. Papers under consideration had to be published no later than the year 2007. Taking into account that each publicized paper is based on investigations and elaborations of predecessors, we make an assumption that adopted methodology lets us to reveal perceptions of energy security representing the latest decade, i.e. evolved during estimated period of 2002-2012. Naturally, the perceptions of energy security determine respective policy implications.

A review of the most recent scientific papers discloses that energy security topic is being tackled in contexts, which are close or directly overlap with research area of sustainable development. We think that energy security is to be treated as a perception rather than notion. Therefore, the presented paper attempts to reveal characteristic, according to recent researches, dimensions of energy security rather than concentrate on delivering precise definition of energy security. In case our considered authors provide a definition, we will take it into account by all means.

The general situation, which is found in the field, could be aptly characterized by a notice that energy security's "blithe appearance throughout a wide range of reports and documents issued over the last decade

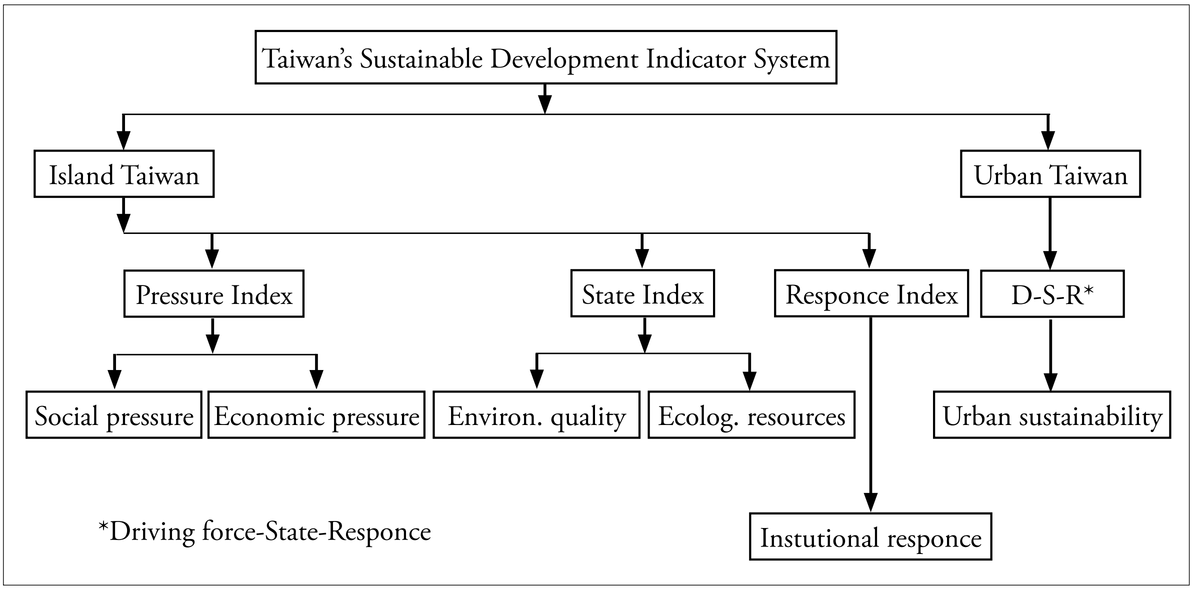

Fig. 1. The dimensions of Taiwan's sustainable development indicators (TSDI) system

Source: Tsai 2010

Authors agree that energy plays an essential role in achieving sustainable development because it is significantly correlated with the social, economic and environmental development (Tsai 2010). As Taiwan Sustainable Development Indicators (TSDI) do not specifically embrace energy indicators, relevant and context-sensitive indicators have been distinguished (Table 2).

Table 2. TSDI selected for energy sustainability.

Index type	Dimension	Indicator	Relationship with sustainability
Pressure	Economic	Energy use intensity (GDP per unit of total energy consumption)	The decrease in density of energy utilization implies an increase in efficiency of energy use, which is a step towards sustainable development due to a decrease in the use of fossil fuels with increasing gross domestic product (GDP) simultaneously.
State	Environmental	Carbon dioxide generation per capita	Carbon dioxide (CO_2) is one of the greenhouse gases, which are closely related to the combustion use of fossil fuels (i.e., the energy sector) and climate change (global warming). The decrease in the emission amount of CO_2 is the goal of sustainable development.

Source: Tsai 2010

That paper is attributed to the stream of researches, e.g. Ciegis *et al.* 2007; de Vries, Petersen 2009; Río, Burguillo 2009; Garcez, Vianna 2009; Gasparatos, Gadda 2009; Gallego Carrera, Mack 2010; McNally, Magee et al. 2009; Tvaronavičienė, Grybaitė 2012; who relate energy security dimensions to sustainable development process. As it was mentioned, the approach deserves special attention and will be elaborated in another paper. Here we just want to draw attention that the boundaries of scientific discussion about energy security perceptions are rather blur: while some authors tackle the notion of "energy security", others switch to the discussion on "energy sustainability", if not to "sustainable development". ***As both terms, i.e. "energy security" and "energy sustainability" appear to be in one or another way related to sustainable development area, we consider them as synonymous, and in the most cases interchangeable***.

2. Energy security and implementation of sustainable security policy

Despite the fact that the study overviewed below concentrates on “sustainable energy”, actually it represents the strand of literature, which identifies energy security problems with energy security policy. The authors state that energy plays the central role in many of today’s crises, directly (e.g., through the emission of greenhouse gases) or indirectly (e.g., through the global geopolitical battle for control over resources) (Hugé, Waas *et al.* 2011). The authors briefly present the genesis of sustainable energy concept in international and supranational organizations. They indicate that “International Energy Agency defines sustainable energy as a balance to be found between energy security, economic development and environmental protection. The Energy Technology Perspectives 2010 (IEA, 2010) demonstrate that these three main objectives go hand in hand in a low-carbon future” (Hugé, Waas *et al.* 2011).

Here we need to point out that according to the International Energy Agency energy sustainability is not considered as synonymous to energy security. Energy sustainability here is lifted to higher level of abstraction as it embraces energy security and even economic development together with environmental protection. The approach is contentious but, nevertheless, undoubtedly contributes to the review of contemporary perceptions of energy security.

The EU approach towards sustainable energy evolved from an emphasis on security of energy supply stressed in 2006 Green Paper on Energy to broader 20–20–20 targets (European Commission, 2010) These are as follows: reduction in the EU greenhouse gas emissions by at least 20% below 1990 levels, a share of 20% of the EU energy consumption from renewable resources and 20% reduction in primary energy use compared with projected levels to be achieved by the improved energy efficiency (Hugé, Waas *et al.* 2011).

It is worth mentioning that the discussion about interrelation of energy security and energy sustainability concept did not gain its momentum, hence, we will use those notions interchangeably. Some scientists do not argue about the terms but rather aim constructing sustainable energy policy (e.g. Table 3).

Table 3. Characteristics of an ideal-typical sustainability assessment in support of energy policy.

(1) Fostering sustainable development objectives	Global responsibility (esp. with regard to trans-boundary and global (GHG emissions) pollution issues) Integration (of environmental, social, economic and institutional issues as well as their interdependencies; of various scientific disciplines and approaches; and of quantitative and qualitative data) Equity (incl. intra-generational (vulnerable groups, burden sharing) and inter-generational (irreversible choices, lock-in) considerations) Precaution Participation
(2) Having a holistic perspective	Assess the system as well as its parts and their interactions Assess the environmental, social and economic impact of the proposal Assess the environmental, social and economic risk facing the proposal
(3) Incorporating sustainability in the assessment process and procedure	Transparency regarding uncertainties, generation and use of data Participation of various stakeholders Avoid irreversible risks and favors a precautionary approach Evaluation of alternatives that offer the greatest overall benefits and avoids undesirable trade offs
(4) Supporting decisions	Continuous and iterative process, starting at the onset of the decision-making process Adequate scope and proportionality Adapted to and integrated into the institutional context

Source: Hugé, Waas *et al.* 2011

Enhancing energy security/sustainability can be achieved through contemporary managed energy infrastructure (Katz, Culler *et al.* 2011), currently known as “smart grids”. That view, in principle, is incorporated into the system of energy-policy support presented above; i.e. incorporating sustainability through generation and use of data (Table 3). Even more concrete directions and their estimations for the enhanced energy security/sustainability are provided in Table 4 (Lior 2011).

Table 4. Qualitative assessment of promising research directions and their U.S. government funding trend (based on the proposed 2012 annual budget).

Direction	Potential	Foreseen improvement	Time scale, years	2012 Government funding trend
Conservation	☆☆☆+	50% reduction of use	Ongoing	☺☺
Buildings energy	☆	20% reduction by 2020	8?	☺☺
Transportation	☆☆☆+	50% of use; 120 g $C0_2$/km by 2012; 1 million electric cars by 2015*	3–20	☺☺
Hydro power	☆	Small hydro, pumped storage, reduction of environmental harm	Ongoing	☹☹☹
Biomass	☆☆+	30% U.S. energy; cellulosic ethanol at $2.76/GGE* in 2012	4–40	☹
Wind	☆☆☆	2.5 c/kWh, 15% of electricity	1–6	☺☺
Solar PY	☆☆☆+	Competitive price: $1/WDC, 4–5 c/kWh	8+	☺☺
Solar thermal	☆☆☆	Competitive price: 4–5 c/kWh	8+	☺
Geothermal (deep)	☆☆	Expand resource: exploration and deep drilling	20	☺
Hydrogen	☆☆	Affordable transport fuel	15	☹☹
Fossil fuel power	☆☆	67–75% efficiency, ~0 emission	6–15	☹☹
Oil and Gas	☆+	Exploration, recovery, transportation	3–15	☹☹☹
Coal	☆+	Exploration, recovery, transportation, conversion	8	☹☹
Energy storage	☆☆☆+	Cost, weight and volume reduction	5–12	☺
Electricity transmission	☆☆☆	Grid expansion, smart grid, loss reduction	10	☺☺
Global warming	☆☆	0 CO_2	10–15	☺
Fuel cells	☆+	60% + efficiency; order of magnitude price reduction, 6 kW/g Pt-type catalyst in 2012	7	☹☹
Micropower	☆☆☆	Cost, market penetration	7+	☺
Superconductivity	☆☆☆	Order of magnitude	30+	☹☹
Nuclear fission	☆	Manageable wastes, no proliferation, safety: Gen IV, thorough review	10	☹
Nuclear fusion	☆☆☆	Feasibility	35+	☺
Space power	☆☆☆+?	Competitiveness	50+	☹☹☹

* ☺: Increased; ☹: decreased.

Source: Lior 2011

Several perceptions provided above represented the context for energy policy making.

As an example of completely different perception of energy, security sustainability could be found in literature tackling the problems of socially responsible enterprise. Hence, representatives of that field include energy issues into the environmental dimension (Lozano, Huisingh 2011). It illustrates priorities for the SR companies, which naturally are different from the tasks solved at national or international levels. Again, we remind an insight that energy security is a context-sensitive perception.

Systematic approach towards energy security is adopted by Chinese scientists (Ma, Linwei 2011). They admit that **sustainable development targets may contradict each other and certain scenarios have to be chosen**. The authors claim that near-term and "go out" policies have to be distinguished and cost-benefit analysis for estimating choices employed. Scientists state that "in the near-term, the main measures to secure oil supply are still to further exploit conventional and unconventional oil reserves, to participate and stabilize the international market, to diversify supply channels, to build up the strategic petroleum reserve (SPR), and to improve energy efficiency. The 'go out' strategy and expedient alternative fuel are only a part of the whole and may not be functional for short-term oil supply disruption and oil price fluctuations. Also, the scale of expedient alternative fuel development and usage should be decided through careful cost benefit analysis" (Ma, Liu *et al.* 2011). Energy security framework is presented below (Figure 2).

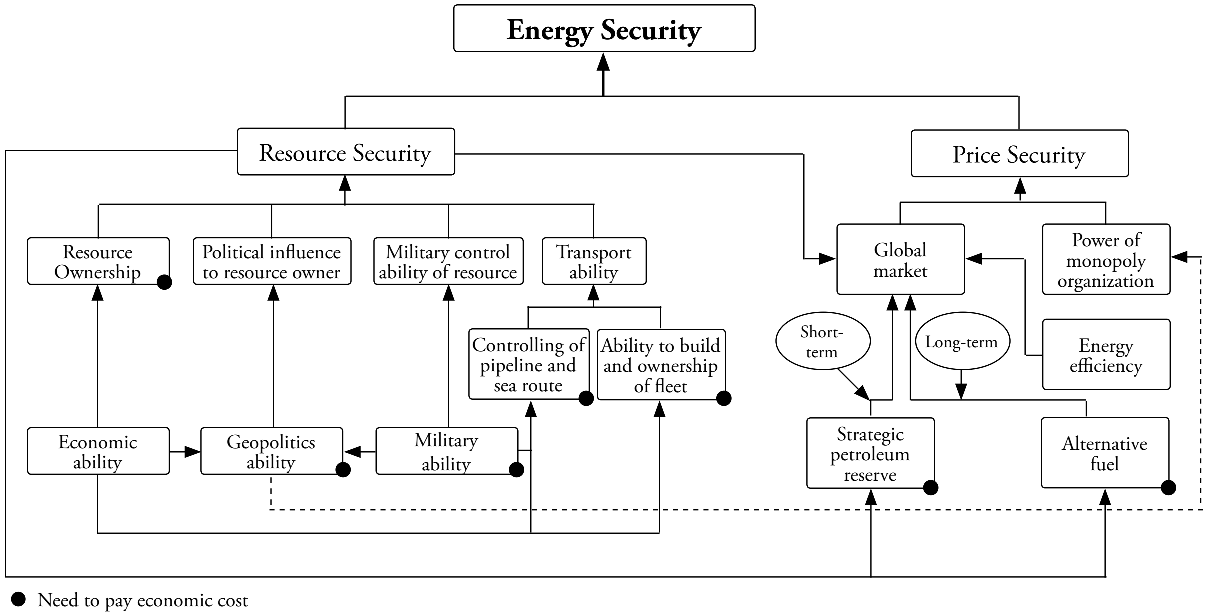

Fig. 2. China's energy security framework
Source: Ma, Liu *et al.* 2011.

As we see, the authors tackle energy securing strategy (or policy) issues, which are related mainly to securing oil supply in the short and long terms. Shortages in supply are considered as national disaster. Notable, some authors analyze energy security by relating it to the man disasters' research area (Park 2011). That aspect is not included in the very comprehensive energy security framework presented above. That only verifies complexity and multifacetedness of energy security perceptions.

Complexity and multifacetedness of energy security measurement and control are embraced by extensive researches of Sovacool (Sovacool 2011a; Sovacool 2011d; Sovacool, Mukherjee 2011; Mukherjee *et al.* 2011). He agrees that energy security can be perceived as energy sustainability and suggests energy security index, which "is constituted by five overlapping dimensions and 20 final metrics"(Sovacool, Mukherjee *et al.* 2011) (Table 5). Energy policy, again, emerges as the ultimate aim.

Table 5. Dimensions, components and metrics comprising the energy security index.

Dimension	Component	Metric	Unit	Definition
Availability	Security of supply	Total primary energy supply per capita	Thousand tons of oil equivalent (ktoe)	Total primary energy supply comprises the production of coal, crude oil, natural gas, nuclear fission, hydroelectric, and other renewable resources plus imports less exports, less international marine bunkers and corrected for net changes in energy stocks.
	Production	Average reserve-to-production ratio for the three primary energy fuels (coal, natural gas, and oil)	Remaining years of production	Ratio of proven recoverable reserves at the end of a given year to the production of those reserves in that year.
	Dependency	Self-sufficiency	% Energy demand by domestic production.	Percentage of total primary energy supply divided by total primary energy consumption.
	Diversi-fication	Share of renewable energy in total primary energy supply	% of supply	Share of geothermal, solar, wind, hydroelectric, tidal, wave, biomass, municipal waste, and biofuel-based energy in total primary energy supply.
Affordability	Stability	Stability of electricity prices	% Change	Percentage that retail electricity prices have changed every five years.
	Access	% Population with high quality connections to the electricity grid	% Electrification	Combined percentage of urban and rural electricity customers with reliable grid connections compared to all people in the country.
	Equity	Households dependent on traditional fuels	% of population using solid fuels	Percentage of the population that relies on solid fuels as the primary source of domestic energy for cooking and heating. Solid fuels include biomass, wood, charcoal, straw, crops, agricultural waste, dung, shrubs and coal.
	Affordability	Retail price of gasoline/petrol	Average price in US$ for 100 L of regular gasoline/petrol PPP (adjusted for Purchasing Power Parity)	Actual prices paid by final consumers for ordinary gasoline inclusive of all taxes and subsidies.
Technology development and efficiency	Innovation and research	Research intensity	% Government expenditures on research and development compared to all expenditures	Expenditures for research and development are current and capital expenditures on creative work undertaken systematically to increase knowledge, including knowledge of humanity, culture, and society, and the use of knowledge for new applications. R&D covers basic research, applied research, and experimental development.
	Energy efficiency	Energy intensity	Energy consumption per dollar of GDP	Total primary energy consumption in the British thermal units per dollar of GDP (2005 US$ PPP).
	Safety and reliability	Grid efficiency	% Electricity transmission and distribution losses	Electric power transmission and distribution losses include losses in transmission between sources of supply and points of distribution and in the distribution to consumers, including pilferage.
	Resilience	Energy resources and stockpiles	Years of energy reserves left	Reserves of coal, oil, gas and uranium divided by total final energy consumption.

Dimension	Component	Metric	Unit	Definition
Environ-mental sustainability	Land use	Forest cover	Forest area as percent of land area	Forest area is the land under natural or planted stands of trees of at least 5 m in situ, whether productive or not, and excludes tree stands in agricultural production systems (for example, in fruit plantations and agroforestry systems) and trees in urban parks and gardens.
	Water	Water availability	% Population with access to improved water	Improved sources include household connections, public standpipes, boreholes, protected wells, and/or spring and rainwater collection. Unimproved sources include vendors, tanker trucks, and unprotected wells and springs. Reasonable access is defined as the availability of at least 20 L a person a day within 1 km of dwelling.
	Climate Change	Per capita energy-related carbon dioxide emissions	Metric tons of CO2 per person	Annual tons of carbon dioxide emissions from fuel combustion divided by total national population.
	Pollution	Per capita sulfur dioxide emissions	Metric tons of SO2 per person	Annual tons of sulfur dioxide emissions from fuel combustion divided by total national population.
Regulation and governance	Governance	Worldwide governance rating	Worldwide governance score	Mean score given for the six categories of accountability, political stability, government effectiveness, regulatory quality, rule of law, and corruption.
	Trade and connectivity	Energy exports	Annual value of energy exports in 2009 US$ PPP (billions)	Total value in US$ of net exports of coal (including coke and briquettes), crude petroleum, and natural gas (including liquefied natural gas).
	Competition	Per capita energy subsidies	Cost of energy subsidies per person (2009 US$ PPP)	Total government expenditures on direct and indirect energy subsidies divided by the national population
	Information	Quality of energy information	% Data complete	% of data points complete for this index out of all possible data points.

Source: Sovacool, Mukherjee *et al.* 2011

Noticeably, such a great number of dimensions can be evaluated with respect to 2 opposite perspectives. From one side, the greater number of dimensions, the more comprehensive view of phenomenon can be reflected. An extensive set of metrics allows policy-makers to choose priorities from a broad menu. On the other hand, a large number of indicators hinder effective management and can lead to rather typical situation when control over a process actually is lost.

As another similar example of suggested metrics of energy security can serve a recent collective paper of the authors' group (von Hippel, Suzuki *et al.* 2011). According to them, "a nation-state is energy secure to the degree that fuel and energy services are available to ensure: (a) survival of the nation, (b) protection of national welfare, and (c) minimization of risks associated with supply and use of fuel and energy services. The five dimensions of energy security include energy supply, economic, technological, environmental, social and cultural, and military/security dimensions. Energy policies must address the domestic and international (regional and global) implications of each of these dimensions"(von Hippel, Suzuki *et al.* 2011)

Table 6. Dimensions and measures/attributes of energy security for energy security policy

Dimension of Energy Security	Measures/attributes	Interpretation
Energy supply	Total primary energy	Higher-indicator of other impacts
	Fraction of primary energy as imports	Lower-preferred
	Diversification index (by fuel type, primary energy)	Lower index value (indicating greater diversity) preferred based on index formula as derived by Neff (1997)
	Diversification index (by supplier, key fuel types)	Lower index value preferred (see above)
	Stocks as a fraction of imports (key fuels)	Higher-greater resilience to supply interruption
Economic	Total energy system internal costs	Lower-preferred
	Total fuel costs	Lower-preferred
	Import fuel costs	Lower-preferred
	Economic impact of fuel price increase (as fraction of GNP)	Lower-preferred
Technological	Diversification indices for key industries (such as power generation) by technology type	Lower-preferred
	Diversity of R&D spending	Qualitative—higher preferred
	Reliance on proven technologies	Qualitative—higher preferred
	Technological adaptability	Qualitative—higher preferred
Environmental	GHG emissions (tones CO_2, CH_4)	Lower-preferred
	Acid gas emissions (tones SO_x, NO_x)	Lower-preferred
	Local air pollutants (tones particulates, hydrocarbons, others)	Lower-preferred
	Other air and water pollutants (including marine oil pollution)	Lower-preferred
	Solid wastes (tones bottom ash, fly ash, scrubber sludge)	Lower-preferred (or at worst neutral, with safe re-use)
	Nuclear waste (tones or Curies, by type)	Lower-preferred, but qualitative component for waste isolation scheme
	Ecosystem and aesthetic impacts	Largely qualitative—lower preferred
	Exposure to environmental risk	Qualitative—lower preferred
Social and cultural	Exposure to risk of social or cultural conflict over energy systems	Qualitative—lower preferred
Military/security	Exposure to military/security risks	Qualitative—lower preferred
	Relative level of spending on energy-related security arrangements	Lower-preferred

Source: von Hippel, Suzuki *et al.* 2011

After reviewing rather wide variety of perceptions of energy security and energy sustainability we need to note, that while provided review reflects contemporary discussion, it is not limited to opinions expressed. There are other not less interesting papers, which contribute and provide further elaboration of energy security perceptions (e.g. Angelis-Dimakis, Arampatzis *et al.* 2012; Siciliano 2012; Hinrichs-Rahlwes; etc.)

3. Subjective perceptions of energy users: a performed survey and its interpretations

We intend to finish the presented review with interesting and relevant to our topic research of above cited scientist Sovacool (Sovacool, Valentine *et al.* 2012). His study is devoted to the analysis of various respondents' perceptions of energy security. The paper presents the survey of 2167 respondents in Brazil, China, Germany, India, Kazakhstan, Japan, Papua New Guinea, Saudi Arabia, Singapore, and the United States. The author asked respondents to rank 16 dimensions of energy security: securing a supply of fossil fuels and uranium; bolstering trade in energy fuels and commodities; minimizing depletion of domestically available fuels; providing predictable and clear price signals; enabling affordably-priced energy services; providing equitable access to energy services; decentralizing to small-scale energy supply; lowering energy intensity (energy use per unit of Gross Domestic Product); researching and developing new energy technologies; ensuring transparency and participation in project sitting and decision-making; offering energy education and information; preserving land and forests; enhancing the availability and quality of water; minimizing air pollution and responding to climate change/adaptation; reducing greenhouse gas emissions/mitigation (Sovacool, Valentine *et al.* 2012). Propositions provided in Table 7 has been tested.

Table 7. Energy security propositions and survey questions

Proposition	Explanation	Survey question(s)
P1: The influence of education	One would expect those with postgraduate and undergraduate education to be more appreciative of participation, decentralization, and education related to energy issues and problems	When you think about energy security for your country of residence in the next five years, how important is it to have small-scale, decentralized energy systems; to ensure transparency and participation in energy permitting, siting, and decision-making; and to inform consumers and promote social and community education about energy issues?
P2: The ignorance of youth	We would expect individuals over the age of 65 to prioritize having stable and predictable energy prices and long-term issues such as minimizing the depletion of energy resources	When you think about energy security for your country of residence in the next five years, how important is it to minimize depletion of domestically available energy fuels?; to have stable, predictable, and clear price signals?
P3: Defending one's vocation	One would expect that perspectives on energy security held by those employed in the private sector would be significantly more conservative, with those participants rating and ranking climate change and environmental dimensions poorly. Industry representatives and government officials would also be expected to rate energy research expenditures highly	When you think about energy security for your country of residence in the next five years, how important is it to minimize the impact of climate change (i.e., adaptation); and to reduce greenhouse gas emissions (i.e. mitigation)?; to minimize the destruction of forests and the degradation of land and soil; to provide available and clean water; and to minimize air pollution?; to conduct research and development on new and innovative energy technologies?
P4: Feminism and mother earth	We would expect women to prioritize climate change, environmental issues, and renewable energy more than men	When you think about energy security for your country of residence in the next five years, how important is it to minimize the impact of climate change (i.e., adaptation); to reduce greenhouse gas emissions (i.e. mitigation)?; to minimize the destruction of forests and the degradation of land and soil; to provide available and clean water; and to minimize air pollution?
P5: The influence of affluence	We would expect developing countries such as Brazil, China, India, Kazakhstan and Papua New Guinea to be predominantly concerned about the security of fossil fuel supply, given their rapid economic growth, whereas developed economies such as Germany, Japan, Singapore, and the United States would prioritize energy efficiency and energy research and development	When you think about energy security for your country of residence in the next five years, how important is it to have a secure supply of oil, gas, coal, and/or uranium?; to have low energy intensity (unit of energy required per unit of economic output)?; to conduct research and development on new and innovative energy technologies?

Proposition	Explanation	Survey question(s)
P6: The have and have nots	One would expect major energy importers such as Germany, Japan, and the United States to be concerned with lessening dependence on foreign supplies and increasing diversification and decentralization, whereas exporters such as Kazakhstan and Saudi Arabia would emphasize trade and the value of energy exports. The rapidly industrializing economies of Brazil, China, and India would be expected to "scramble" for as many energy resources as they could acquire.	When you think about energy security for your country of residence in the next five years, how important is it to promote trade in energy products, technologies, and exports?
P7: The presence of poverty	One would expect big geographic countries with small populations and/or low population densities such as Papua New Guinea and Kazakhstan to prioritize expanding energy access and affordability, whereas those with large populations and/or higher densities such as India, Japan, and Singapore would place greater emphasis on minimizing environmental insults and preserving water, air, and land	When you think about energy security for your country of residence in the next five years, how important is it to have affordably priced energy services?; to minimize the destruction of forests and the degradation of land and soil; to provide available and clean water; and to minimize air pollution?
P8: Climate change and vulnerability	One would expect richer countries such as Germany, Japan, Singapore, and the United States to place a higher priority on climate change mitigation, whereas developing countries such as Brazil, India, China, Kazakhstan, and Papua New Guinea would prioritize adaptation	When you think about energy security for your country of residence in the next five years, how important is it to minimize the impact of climate change (i.e., adaptation); and to reduce greenhouse gas emissions (i.e. mitigation)?
P9: The hand of political control	One would expect highly competitive, representative democracies such those found in Germany, India, and the United States to place greater emphasis on decentralization, participation, and education, whereas more tightly controlled economies such as in China, Saudi Arabia, and Singapore would emphasize centralization and less-inclusive decision-making	When you think about energy security for your country of residence in the next five years, how important is it to have small-scale, decentralized energy systems; to ensure transparency and participation in energy permitting, siting, and decision-making; and to inform consumers and promote social and community education about energy issues?

Source: Sovacool, Valentine *et al.* 2012

The results of the survey are provided in Table 8. It appeared that 3 propositions out of 9 were verified.

Table 8. Evaluation of energy security propositions

Proposition	Supported	Unsupported	Neither
P1: The influence of education		✓	
P2: The ignorance of youth			✓
P3: Defending one's vocation		✓	
P4: Feminism and mother earth	✓		
P5: The influence of affluence			✓
P6: The have and have nots	✓		
P7: The presence of poverty			✓
P8: Climate change and vulnerability		✓	
P9: The hand of political control	✓		

Source: Sovacool, Valentine *et al.* 2012

Those results from our subjective point of view would receive the following comments:
1. The respondents have different background and, additionally, they belong to different countries, hence a unanimity of views seems to be implausible.
2. Formulation of propositions is too ponderous .
3. Respondents do not consider energy security to be important enough for getting deeper into ongoing discussion. Hence, energy security results, as it was indicated above, verify that perceptions of energy security are extremely context-sensitive. In this particular case, a researcher is a professional in energy security and formulates questions from his knowledge platform. Respondents, alas, do not care about energy security issues, hence, their responses can serve as an illustration of a gap, which exists between energy security researches/policy-makers and far-end users.

4. Conclusions:

The revision of the most recent literature in the field of energy security let us come to the following main insights:
- there is still no unanimous agreement how energy security can be defined and the discussion is ongoing;
- rather frequently energy security topic is being tackled in the contexts, which are close or directly overlap with the research area of sustainable development;
- the notion "energy security" is indefinable universally, as it is in principle context-sensitive perception. It means, it an be contemplated from the point of view of, e.g. scientists (in the fields as energy, IT, economics, management, logistics), policy-makers in regional, national and international levels, energy suppliers, energy users, military forces and other stakeholders;
- the concepts "energy security" and "energy sustainability" appear to be interrelated; we consider them as synonymous, and in the most cases interchangeable;
- the mostly used dimensions for energy security assessments are the following: availability, adequacy of capacity; affordability; technological efficiency and environmental sustainability;
- sustainable energy policies are aimed to secure oil supply, diversify energy sources, increase energy efficiency, control pollution;
- implementation of energy-sustainable policies requires adequate end users' perceptions, otherwise there is risk to loose efficiency;
- sustainable energy policy targets contradict each other, hence, certain scenarios have to be chosen, weighted through cost-benefit analysis and communicated to the end users.

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