

Professor Ken Baldwin
Director, ANU Energy Change Institute
Research School of Physics and Engineering
Cockcroft Building 58, Mills Road
Canberra ACT 0200 Australia

T: +61 2 6125 4702 (direct)
T: +61 2 6125 0633
F: +61 2 6125 2452
E: energy.change@anu.edu.au
W: www.energy.anu.edu.au

COAG Energy Council Secretariat
energycouncil@industry.gov.au
COAG Energy Council Secretariat GPO Box 9839 Canberra ACT 2601

October 4, 2016

Dear COAG Energy Council Secretariat

Submission to COAG Energy Council, Energy Market Transformation Team on Consumer Protections for Behind the Meter electricity supply: Consultation on regulatory implications.

Please find below a submission by the Australian National University Energy Change Institute on Consumer Protections for Behind the Meter electricity supply in response to the Consultation Paper on this topic.

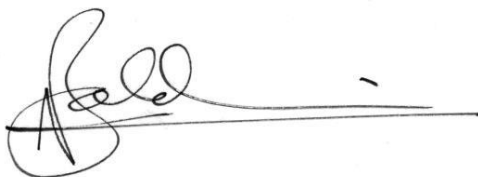
The Energy Change Institute of the Australian National University comprises more than 200 staff and PhD students from all 7 Colleges of the University, and over \$100 Million in infrastructure and facilities, supported by a major portfolio of external grant funding.

The Institute combines leading research and teaching on energy through a broad portfolio ranging from the science and engineering of energy generation and energy efficiency, to energy economics, regulation, security, sociology and policy.

We hope that this submission is useful in informing your thinking, and look forward to further engagement with the COAG Energy Market Transformation Project Team as it carries out this important work.

In the meantime please contact Professor Ken Baldwin for queries regarding this submission.

Yours sincerely,



Professor Ken Baldwin,
Energy Change Institute Director

**SUBMISSION ON CONSUMER PROTECTIONS FOR BEHIND THE METER
ELECTRICITY SUPPLY: CONSULTATION ON REGULATORY IMPLICATIONS
BY AUSTRALIAN NATIONAL UNIVERSITY ENERGY CHANGE INSTITUTE (ANU ECI)**

Introduction

Rapid cost declines of solar photovoltaic technologies are increasingly being combined with additional disruptive energy technology innovations, including cheaper battery storage, demand side response products, third party electricity sharing platforms, and electric vehicles. These categories of new technologies and innovative combinations of them have significant potential to cause disruption to entrenched business models in the electricity utility sector. This in turn raises issues for regulators and legislators.

This submission argues that national electricity laws should be reformed to facilitate competition and particularly to allow the entry of renewable energy technologies to contribute to Australia's response to the urgent problem of climate change.

We maintain that there is a lack of empirical evidence to support the proposition that there are serious problems with consumer protection in the distributed energy sector.

We agree with the Consultation Paper which acknowledges there is a risk that additional regulation of new energy technologies under consumer protection could amount to a restriction on innovation and competition.

It also notes there is a need to “ensure that the regulatory frameworks are not creating barriers to innovation or unnecessary red tape”. We concur with this view, and cite evidence from overseas where this occurs (see below).

The Issues as Described by COAG Energy Council

It appears that COAG already has in its possession advice about the various thresholds of application of the different legal frameworks, as the Consultation Paper states “previous advice provided to Ministers in July 2015, which highlighted that different protections apply depending on how the service is provided (including whether it is a lease or power purchase agreement).”¹

The COAG Consultation paper drew the distinction between “granting persons selling electricity in this manner an exemption from the requirement to hold a retailer authorisation.”

The Australian Energy Regulator (AER) already has a detailed framework for exemptions from retailer authorisation and there is no cause to change this arrangement.

According to the AER :

“Under the Retail Law, a person usually must hold a retailer authorisation in order to sell energy. Situations where a retailer authorisation is not necessary or appropriate include those where the seller is selling energy incidentally (ie the sale is not the seller's core business), or where the cost of having an authorisation outweighs the benefits to customers, or where an insignificant amount of energy is being sold. Examples include:

¹ <http://www.scer.gov.au/current-projects/energy-market-transformation>

- Retirement villages where an owner or manager buys electricity from an authorised retailer, then 'onsells' it to residents;
- Caravan parks (or manufactured homes parks) where an owner or manager buys electricity from an authorised retailer, then 'onsells' it to residents;
- Bodies corporate/owners' corporations who buy electricity from an authorised retailer, then 'onsell' it to tenants or residents.
- Persons selling energy at no profit or as a community service.

"People engaging in such activities may be eligible for a retail exemption. The AER administers retail exemptions. The AER's [Exempt Selling Guideline](#) sets out the AER's approach to retail exemptions, including a full list of the types of activities which are exempt from the requirement to hold a retailer authorisation."²

Q. Of the various issues raised in this paper, which areas have the highest risks and should be prioritised?

The paper states that "Currently, different customer protections apply to products and services for electricity supply behind the meter depending on the business model employed. For example, a solar PV system which is purchased or leased is subject to the ACL whilst a solar PV system installed at a customer site in accordance with a power purchase agreement is regulated by the NECF exemption framework." (p.5)

In relation to the latter, a PV system involving direct sale of electricity under a PPA, this most likely applies to a non-household situation involving a large commercial or industrial consumer (e.g. a mine site or factory site). The owners of these sites are most likely able to afford their own legal and engineering advice relating to appropriateness and risks of the proposed terms of a power purchase agreement put forward to them by the project developer and may not require the application of consumer law (p.5).

In our opinion, the highest risks are first, that the additional regulatory framework protects incumbent vertically integrated generator-retailers by providing impediments to consumers taking up disruptive technologies on the basis of research and careful decision-making.

Second, is the risk that small-scale solar pro-sumers (producer-consumers) will be subjected to differentiated and discriminatory treatment by their electricity distribution provider on the alleged grounds of impact on the network, and thereby subjected to higher fixed charges in billing, as was originally intended in South Australia by SA Power Networks, prior to litigation involving the Australian Energy Regulator in 2015.

The COAG Energy Transformations Team may find it insightful to examine the recent experience in several states of the United States (eg Arizona, Florida) where incumbent conventional fuel generation and distribution utilities have sought to influence the regulatory framework applying to solar energy in order to restrict competition, while using "consumer protection" as the mechanism. This campaign to influence the regulatory framework at State level to slow the advance of solar energy has in part been conducted through ALEC, the American Legislative Exchange Council.³

² AER website, <https://www.aer.gov.au/retail-markets/retail-exemptions>

³ Eisner, G. "Edison Electric Institute Campaign Against Distributed Solar", *Energy and Policy Institute*, <http://www.energyandpolicy.org/edison-electric-institute-campaign-against-distributed-solar/>

Q: *Is there potential for consumer harm that has not been identified in this paper which warrants regulated consumer protection?*

The COAG Consultation Paper states “As storage and other technologies enter the market, the challenges for supporting competition and protecting consumers will increase.” (p.4). We maintain it is important that new technologies including storage increase competition and demand side abatement in the retail electricity market. Impediments to storage and related distributed generation technologies imposed by additional regulatory requirements will restrict this competition.

This is in agreement with the COAG Consultation Paper which states that : “While strong consumer protections are essential, a further consideration is the need to seek a balance between the benefits of such protections and the cost of additional regulatory obligations. Requiring consistent protections in these situations could act as a barrier to competition and innovation. The introduction of emerging products and services in the energy market may be stifled if the correct balance is not achieved.”(p.8)

We are in agreement with the statement that “Regulation regarding the availability and reliability of behind the meter electricity systems may significantly increase the costs of these systems for consumers, inhibiting their ability to select this option and impact the ability of individual suppliers to offer behind the meter products and services.” (p.9) We submit that such additional regulation would reduce the power of choice of small scale prosumers within the retail electricity market.

COAG should apply a principle of maximising competition in the electricity sector, whether this is generation, distribution, transmission, or retail or the wholesale and ancillary markets. Existing government policy is to approach regulatory reform by examining whether it impedes or encourages competition (*National Competition Policy* following on from the Hilmer Review of Competition).⁴ In particular the COAG Competition Principles Agreement of April 1995 set out a Legislation Review program as follows (s.5):

“The guiding principle is that legislation (including Acts, enactments, Ordinances or regulations) should not restrict competition unless it can be demonstrated that:

- (a) the benefits of the restriction to the community as a whole outweigh the costs; and
- (b) the objectives of the legislation can only be achieved by restricting competition.”

There are consumer interests in maximising competition in the electricity generation sector which must be weighed against any perceived benefits from additional regulation of new energy technologies in the electricity sector, particularly in behind the meter applications.

Whether any proposed rule will indirectly block and limit competition in the electricity sector should be closely examined because if competition and innovation is restricted (e.g. by placing new restrictions on the use and application of solar PV and battery storage technologies) this will ultimately damage the interests of consumers.

Vulnerable Consumers?

Q: *Are there classes of vulnerable consumers in relation to behind the meter electricity systems? What do these classes of vulnerable consumers look like?*

We submit that the vast majority of consumers who install solar PV systems and battery systems and battery-solar-grid interface technologies such as Reposit software, will tend

⁴ Hilmer et al., National Competition Policy Review (1992) *National Competition Policy*, AGPS.

to be the ‘early adopter’ or highly informed consumer making a deliberate and conscious decision to install new technologies. This is consistent with the work of Rogers (1995) in his theory of innovation diffusion.⁵

The majority of producer-consumers investing in such technologies are doing so with the intention of protecting their households and small businesses from the less favourable consumer outcomes associated with a ‘do-nothing’ connection to a conventional electricity retail product involving purchase of fossil fuel generated electricity, and the inevitable price rises associated with being a ‘do-nothing’ consumer.

In summary, the group of consumers installing solar PV and storage systems and other behind the meter technologies are unlikely at this point in time to be categorized frequently as vulnerable consumers at risk of exploitation. In any case a large body of existing consumer protection law (Australian Consumer Law, supplemented by State laws on misrepresentation) will guard against unconscionable conduct in business and will protect against goods and services that are not fit for their intended purpose.

The Consultation paper does not clearly acknowledge that these consumers are deliberately making a choice between the dominant grid connected electricity model with continuously rising prices and the alternative of renewable distributed energy sources. They are also doing so in order to attempt to reduce the carbon intensity of the electricity market in Australia.

If we are to support the ‘Power of Choice’ of electricity consumers⁶, then we need to make a regulatory framework that supports and encourages that group of conscious consumers who choose to install distributed energy systems, often with storage, in order to exercise their power of choice as consumers.

Vulnerable consumer protection through Income Contingent Loans

We submit that in some instances there are indeed some groups of potentially vulnerable consumers who could be affected.

What do these classes of vulnerable consumers look like?

Low-income households which are either unwilling or unable to finance the purchase of behind the meter electricity systems because of inadequate or zero savings. Up-front investment costs and lack of access to credit are limiting factors when it comes to making a decision to install, even though the household would reap an immediate benefit through lower electricity bills. While bank loans might be proposed as a solution, an emerging literature suggests that prospective borrowers are reluctant to take on bank loans because of two key impediments: the immediate repayment hardships, and/or the possible stigma and loss of credit rating associated with default, or the stigma of credit rejection associated with poor credit history or rating.

At what point does a consumer become vulnerable?

The recent trends in higher electricity prices and declining electricity demand exacerbate social disadvantage: those who can afford to do so install behind the meter electricity

⁵ Rogers, E.M. (1995) *The Diffusion of Innovations*, The Free Press, New York.

⁶ AEMC (2012) *Power of Choice Review - Giving Consumers Options in the Way They Use Electricity*, Final Report, 30 November, Sydney. <http://www.aemc.gov.au/Markets-Reviews-Advice/Power-of-Choice-Stage-3-DSP-Review>

systems, leaving those least able to afford it to bear the brunt of increased electricity prices to cope with the declining customer base and the large fixed-costs of electricity supply. In this context, customers who cannot afford air conditioners and other high peak-use electrical appliances (swimming pool filters and pumps) are already paying disproportionately for the higher electricity prices arising from demand-peaking caused by such uses.

What consumer protections are needed for these identified classes of vulnerable consumer?

A potential policy solution is the use of income contingent loans (ICLs) to help low-income households finance the initial purchase cost for behind the meter electricity systems, thereby enabling them to avoid spiralling electricity costs, or the disadvantages of taking out a bank loan.

An ICL is a government risk management instrument in which citizens are provided with financial assistance in the form of a loan, for which repayments only come into effect when their income reaches a given level. The best-known example of an ICL is the Australian Higher Education Contribution Scheme (HECS), in which the government effectively pays the up-front tuition costs for students enrolling in Australian universities.

ANU Energy Change Institute professors Ken Baldwin and Bruce Chapman (the architect of HECS) have proposed a similar scheme which can be extended to low-income households wishing to install behind the meter electricity systems.⁷

The advantage of using ICLs in the context of behind the meter electricity systems is threefold:

1. The loan can be repaid with negligible transaction cost through the taxation system
2. The loan is for an asset which remains with the house and can be recovered from the house sale price: therefore it is of low risk compared to investment in human capital such as HECS.
3. Any prospective losses due to default can be made revenue neutral to government by applying an appropriate up-front surcharge to the amount loaned.

Existing consumer protection regulation

Avoid Additional Consumer Protection Provisions

Q: Are there any unique regulatory challenges that are presented by the different deployment scenarios? (or are presented by the different ownership models?)

We submit that there are no unique regulatory challenges associated with behind the meter deployment scenarios or ownership models. Existing consumer law at Federal and State level provides protections and there should be not attempt to override it or create a parallel framework of consumer protection law, as doing so would be unnecessary (i.e. involve re-inventing the wheel).

⁷ Details of the proposed scheme can be found at: K. Baldwin, B.Chapman and Umbu Raya, (2015) "Using Income Contingent Loans for the Financing of the Next Million Australian Solar Rooftops, ANU Research School of Economics, Working Paper no. 627 (2015): <https://www.rse.anu.edu.au/researchpapers/ECON/wp627.pdf>

We submit that any proposal to add additional regulation on top of the existing Australian Consumer Law (which commenced January 2011 in order to replace and simplify 20 State and Territory based consumer protection laws) would be duplicative and unnecessary.⁸ For example, the Australian Consumer Law already prohibits misleading or deceptive conduct, imposing a strict liability on product vendors not to make misrepresentations.⁹ This includes conduct that is *likely* to mislead or deceive.¹⁰ The ACL also specifies examples of at least 13 different types of terms of consumer contracts that may be held to be unfair.¹¹ The ACL also prohibits false or misleading representations about goods or services. For example a false or misleading representation that goods are of a particular standard, quality, value, grade, composition, style or model.¹² The Act also prohibits a false or misleading representation that goods or services have sponsorship, approval, performance characteristics, accessories, uses or benefits.¹³

Principles regarding the NECF - The Need for uniform application

There should be some attempt to standardise the National Energy Customer Framework NECF as there is too much regional variation on whether it applies or not, for example the position of Western Australia, Northern Territory and (to a lesser extent, Victoria) which are not subject to the NECF.¹⁴

As explained by the Consultation Paper - "Current energy specific consumer protections in the National Electricity Market are provided as part of the National Energy Customer Framework (NECF) through the National Energy Retail Law (NERL) and National Energy Retail Rules. Currently the NECF framework applies in the Australian Capital Territory, Tasmania, South Australia, New South Wales and Queensland. Consumer protections in Victoria are provided by jurisdictional legislation. These protections work in conjunction with the general protections provided through the Australian Consumer Law (ACL). The two frameworks often overlap for behind the meter supply depending on the arrangements a customer has for example with their electricity supplier and exempt seller."

The NECF Law and Rules (s.16(1)) applies to retailers and distributors of electricity.

the sale and supply of electricity or gas or both to customers; and

- (b) a retailer to the extent the retailer sells electricity or gas or both; and
- (c) a distributor to the extent the distributor supplies electricity or gas or both.

⁸ The Australian Consumer Law is found in Schedule 2 of the *Competition and Consumer Act 2010* (Cth).

⁹ Australian Consumer Law, s.18.

¹⁰ Australian Consumer Law, s.18(1).

¹¹ ACL, s.25(1).

¹² ACL, s.29(1)(a).

¹³ ACL, s.29(1)(g).

¹⁴ See <http://www.aemc.gov.au/Energy-Rules/Retail-energy-rules/Guide-to-application-of-the-NECF>.

Table : Bodies involved in regulation of the solar energy sector in Australia

<p>CER Clean Energy Regulator</p> <p>Overall responsibility for management of Renewable Energy Target.</p> <p>Ensures incentive is only provided where systems have been installed by accredited installer and with valid products.</p> <p>Undertakes independent inspection of a statistically significant sample of installations</p>
<p>“State-based electrical bodies</p> <p>Overall responsibility for electrical licences, electrical safety, and electrical product compliance in each state.</p>
<p>State-based consumer protection bodies</p> <p>Oversight for consumer related complaints in relation to Australian Consumer Law, including product recall (in collaboration with relevant state authorities).”</p>
<p>Clean Energy Council</p> <p>Oversees accreditation of solar installers including installation guidelines, continuing professional development programs and dispute procedures. Maintains listings of products eligible to be installed (based on Australian and International Standards) and to access incentives. Manages Solar PV Retailer Code of Conduct.</p>

Source: This table is reproduced from Clean Energy Council (2015) at 2-3.

Lack of Evidence of a Consumer Protection Crisis in the Solar Sector

Behind the meter technologies is not new, as there are hundreds of thousands of installations already running in the solar PV sector in Australia. There is no current evidence of a crisis requiring special legislation.

There is some available evidence regarding consumer complaints and quality control issues in the solar sector. However examination of the detail of the data, reproduced below from the Clean Energy Council’s 2015 paper, *Best Practice Regulation of the Solar Sector*, suggests that any claim that there is a serious or widespread problem of consumer protection can be dismissed as a deliberate exaggeration.

The CEC stated:

“Clean Energy Regulator (CER) data that shows that replacement solar panels account for just 0.125 per cent of all certificates issued under the Small-scale Renewable Energy Scheme (SRES).

- There have been 67 complaints relating to solar systems lodged with the Clean Energy Council in the past twelve months. Eight were related to products, of which six were related to inverters, one to a DC isolator and one to solar panels.
- More than 173,000 solar PV systems were installed in 2014, and only 24 complaints about panels have been received by an industry complaints portal run by the Australian PV Institute¹ for the 4,500 installers and hundreds of thousands of solar customers.
- The CER has administered an inspection scheme since May 2011. There have been

13,015 independent inspections of solar PV systems and 3.86 per cent (or 503) were assessed as 'unsafe'². The CER notes that substandard rates have declined, which "coincided with increased communication by industry... and improved solar products". Over 80 per cent of systems assessed as 'unsafe' were in relation to DC isolators, the majority relating to the rooftop installation of these devices as recently required."¹⁵

There is evidence that the solar industry has taken additional steps to ensure quality control of products and installations and to protect consumers. The *Consultation Paper* does not mention or take account of these initiatives, which in our opinion is a serious omission.

According to the Clean Energy Council: "The Solar PV Retailer Code of Conduct is approved by the Australian Competition and Consumer Commission (ACCC). Since its launch on 20 November 2013 it has attracted 19 signatories and has become widely accepted as the benchmark for quality. The CEC has recently applied to the ACCC to extend the scope of the Solar PV Retailer Code of Conduct to providers of solar leasing products and solar power purchase agreements (PPAs)."¹⁶

Specific problem areas identified

The CEC admits that the following four areas are of concern:

"Consumers, the solar PV industry and the CEC identified the need for an industry code of conduct that would address issues such as:

- Misleading claims given to consumers regarding the performance of their PV system and future electricity bills;
- Misleading advertising regarding the size of PV systems, the value of available government incentives, and the suitability of the PV system;"

"The retailer not taking responsibility for the whole of the PV system including product warranties and workmanship; and

- The retailer not taking responsibility for the actions of subcontracted parties acting on their behalf and any parties who generate sales leads utilised by the retailer."¹⁷

Definitions and Thresholds

Q: Is the behind the meter electricity system definition appropriate for our purposes? In defining a behind the meter system, is it important to consider other factors about the system such as:

a) the ownership model b) the role of the system c) the number of customer's supplied.

Is it important to consider behind the meter electricity systems for small and large customers for our purposes?

A logical approach to selecting the threshold for any rule changes relating to Behind the Meter technologies is to use existing definitions in the NECF, and the National Electricity Rules. It is suggested to take account of the existing thresholds for classification of generators (eg 30 MW) in Chapter 2 of the National Electricity Rules. For example the definition of Semi - Scheduled Generator (in Rule 2.2.7). Likewise it makes sense to use the definitions of Customer, Market Customer, First and Second Tier Customer set out in the NER. One approach would be to make any new rules applicable to any participant who is registered in one of the four categories of 'Market Participant' (Rule 2.4.1)

¹⁵ Clean Energy Council (2015), *Best Practice Regulation of the Australian Solar Industry*, p.3.

¹⁶ Clean Energy Council (2015), *Best Practice Regulation of the Australian Solar Industry*, p. 11

¹⁷ CEC, 2015, at pp.10-11.

Likewise it would be logical to take account of the thresholds applicable in the National Energy Retail Law, particularly the meaning of customer (s.5), provisions relating to consumption thresholds for business customers (s.6).

Equality of treatment (of solar customers) principle

Retail applications of behind the meter storage technologies are vulnerable to unfavourable interpretations of 'cost reflective' pricing by distribution network service providers. New network tariffs involving a higher fixed component will damage the business case for solar PV + storage.

Under 6.18.4(3)(a) National Electricity Rules there are principles governing assignment of retail customers to tariff classes, which state the Australian Energy Regulator, in approving proposed pricing, must have regard to the following principles:

- "retail customers with micro-generation facilities should be treated no less favourably than retail customers without such facilities but with a similar load profile".¹⁸

The background to this was the proposal in May 2015 by SA Power Networks for tariffs in which customers with PV would pay a higher price c/kWh for electricity. The AER rejected this aspect of the proposed tariffs, and then SAPN appealed the decision to the Federal Court. In the decision of the Federal Court of Australia, of Jan. 2016 by Justice Mansfield in *CKI Utilities Development Pty Ltd v Australian Energy Regulator*, the application by the DNSP for judicial review of a decision of the Australian Energy Regulator (AER) in determining that a pricing proposal was deficient under the National Electricity Rules (NER), was rejected. The decision of the AER was upheld by the Court. In this matter the Total Environment Centre was heard as Amicus Curiae. The TEC argued that a PV customer would be required to pay higher rates than the rates which a non-PV customer, that is a residential customer with a similar or the same load profile but without solar PV connected, would pay. On that basis, the TEC argued that the Pricing Proposal of SAPN was inconsistent with the requirement identified in the AER Distribution Determination based upon cl 6.18.4(3)(a) of the Rules.

Reform of the National Electricity Objective

Q: What objectives, beyond the Energy Council's general objective, should be held in mind in addressing regulatory arrangements for behind the meter electricity systems?

The reform of electricity law must take place cognizant of the fact that Australian Electricity law is at variance with, for example, UK and German electricity law in that it does not contain any environmental protection objective, whereas the law in those jurisdictions explicitly does so.

The need for reform of National Electricity Law objectives has been examined in detail by ANU College of Law PhD scholar and international energy consultant Mr. Glen Wright, in an article published in the international peer reviewed journal *Energy Policy*.¹⁹

¹⁸ 6.18.4(3)(a) National Electricity Rules.

¹⁹ Wright, G. 'Facilitating Efficient Augmentation of Transmission Networks to Connect Renewable Energy Generation: The Australian Experience' (2012) 44 *Energy Policy* 79-91; 'Reforming the National Electricity Objective to improve environmental outcomes in the National Electricity Market'

There should be a broadening the NEO National Electricity Objective in s.7 of the NEL, to involve addressing climate change and environmental impacts of electricity generation should be taken into account in the making of the NER and other aspects of electricity law. The present objectives concerning price, quality, safety, reliability and security of supply of electricity; and the reliability, safety and security of the national electricity system, does not mention 'the environment'.²⁰

By contrast to the Australian law, the UK Electricity Act 1989 (UK), in s.3A(5) provides:

- Subject to subsection (2), the Secretary of State and the Authority shall carry out their respective functions under this Part in the manner which he or it considers is best calculated—
 - (a) to promote efficiency and economy on the part of persons authorised by licences or exemptions to transmit, distribute or supply electricity and the efficient use of electricity conveyed by distribution systems;
 - (b) to protect the public from dangers arising from the generation, transmission, distribution or supply of electricity; and
 - (c) to secure a diverse and viable long-term energy supply,
 and shall, in carrying out those functions, have regard to the effect on the environment of activities connected with the generation, transmission, distribution or supply of electricity.²¹

Conclusion

National electricity laws must be reformed to facilitate competition and allow the entry of renewable energy technologies without additional impediment. Otherwise, the resistance of established interests will hinder Australia's response to the urgent problem of climate change. Both Germany and the UK are further ahead when it comes to an explicit inclusion of environmental objectives and the promotion of renewable energy within national electricity law.

There is currently a lack of empirical evidence to support the proposition that there are some particularly serious or incipient problems of consumer protection within the distributed energy sector. This submission argues that generally speaking when it comes to consumer protection, there is little that existing consumer protection law cannot address.

We agree with the Consultation Paper that additional regulation of new energy technologies under consumer protection could amount to a restriction on innovation and competition. There is a need to ensure that ongoing reform of regulatory frameworks in the electricity sector do not create barriers to innovation or unnecessary regulatory requirements that replicate or confuse the application of existing consumer protection law.

(Total Environment Centre, 2013); 'The National Electricity Market and the Environment: are we heading in the right direction?' (2012) 4 *National Environmental Law Review* 43 – 50.

²⁰ National Electricity Law,

http://www.austlii.edu.au/au/legis/sa/consol_act/neaa1996388/sch1.html

²¹ UK Electricity Act 1989 (UK), in s.3A(5), <http://www.legislation.gov.uk/ukpga/1989/29/section/3A>

Selected References

- AEMC (2012) *Power of Choice Review - Giving Consumers Options in the Way They Use Electricity*, Final Report, 30 November, Sydney. <http://www.aemc.gov.au/Markets-Reviews-Advice/Power-of-Choice-Stage-3-DSP-Review>
- Australian Energy Regulator (2016) *Retail Exemptions*, <https://www.aer.gov.au/retail-markets/retail-exemptions>
- Clean Energy Council (2015), *Best Practice Regulation of the Australian Solar Industry*, p.3.
- Department of Industry, (2016) National Energy Customer Framework, <http://www.industry.gov.au/Energy/EnergyMarkets/Pages/NationalEnergyCustomerFramework.aspx>
- Graffy, E. & Kihm, S. (2014) “Does Disruptive Competition Mean a Death Spiral for Electric Utilities?”, 35 *Energy Law Journal* 1, 39-43.
- Hall, Stephen and Timothy J Foxon, ‘Values in the Smart Grid: The Co-Evolving Political Economy of Smart Distribution’ (2014) 74 *Energy Policy* 600
- Muro, M and Saha, D, “Rooftop solar: Net metering is a net benefit”, Brookings Institute, May 23, 2016. <https://www.brookings.edu/research/rooftop-solar-net-metering-is-a-net-benefit/>
- Pyburne, P. (2011) “Australian Energy Market Amendment (National Energy Retail Law) Bill 2011: Bills Digest No. 16, 2011–12, Federal Parliamentary Library.
- Pyper, J. “Deep Politics, Dark Money and Fraud Join the Solar Party”, June 20, 2016, <http://www.greentechmedia.com/articles/read/Deep-Politics-Dark-Money-And-Fraud-Join-the-Solar-Party>
- Rogers, E.M. (1995) *The Diffusion of Innovations*, The Free Press, New York.
- Schweers, J. “Solar energy advocates focus on defeating utility-sponsored amendment”, Tallahassee Democrat (Florida), September 18, 2016, <http://www.tallahassee.com/story/news/2016/09/18/solar-energy-advocates-focus-defeating-utility-sponsored-amendment/89826260/>
- Scott, I. “Applying Stakeholder Theory to Utility Regulation” 42 *Ecology Law Currents* 1 2015.
- Slocum, J. (2013) “Threat from Behind the Meter: The Case for Utilities to Compete Directly with Distributed Resources”, *Public Utilities Fortnightly*, July 2013, at 46-51, 57.
- Stein, A. (2014) ‘Reconsidering Regulatory Uncertainty: Making a Case for Energy Storage’ 41 *Florida State University Law Review* 697
- Stigler, G., (1971), “The Theory of Economic Regulation” 2(1) *Bell Journal of Economics and Management Science*, 3-21

Tomain, J. P, “Our Generation’s Sputnik Moment”: Regulating Energy Innovation’ (2011)
31 *Utah Environmental Law Review* 389

Unruh, G. C, ‘Understanding Carbon Lock-in’ (2000) 28 *Energy Policy* 817