

submissions@ea.govt.nz with "Enabling Mass Participation Issues Paper" in the subject line

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**Q1.**

***What is your view of the potential competition, reliability and efficiency benefits of more participation?***

Human beings, primarily members of the Anglosphere, have generated an Anthropocene that now imperils all humankind. Climate, water, ocean, soil, biomass and other systems that sustain human life are exponentially collapsing.

In brief, our Anglosphere credit systems, which dominate global transactions, are profoundly psychotic in that they are based in delusional uses of vital minerals - mineral oil/gas and coal in particular - and continuous warfare for them.

The probable mass extinction of human societies will occur when prevailing Anglosphere credit systems implode, as they must if our present behaviour continues. The nature of our derivative trading systems means this will be a sudden event, probably triggered by disruption to mineral oil/gas supplies or a climate event. The Anglosphere is already waging war on the peoples of many regions of the world for their rare minerals and the credit implosion will in turn trigger global warfare on a catastrophic scale.

This holocaust is not inevitable. However the physics of our situation is such that this catastrophe can only be avoided by enabling all humans being able to make intelligent uses of our electrical potential at every level - individual, community, national and global.

**Q2.**

***What is your view of the opportunities to promote competition and more participation in the electricity industry?***

The framework of this question lacks science and thus is impossible to answer in meaningful way. The Electricity Authority, like its predecessor, the Electricity Commission, does not define electricity. Indeed analysis of its language indicates the "Electricity Authority" is founded in non-science and is thus a totally unsustainable institution. This is consistent with its history. In the prelude to the 2005 General Election I surveyed CEOs of key Government Departments and political party leaders for their definitions of energy, power and electricity. The Electricity Commission advised that they had searched the office and could not find a definition of electricity.

Non-science frameworks include:

**Example 1**

In the case study of an “electricity consumer” p11-12 the document equates energy with power with electricity. This equation, **energy = power= electricity**, is a complete denial of the principles of physics i.e. it is profound and dangerous non-science.

### **Example 2**

Paragraph 2.1 defines the “electricity industry” as a distinct entity to “telecommunications, transport, accommodation and banking”. These are all electrical systems and its complete failure to comprehend this fundamental physics means the Electricity Authority tends to facilitate waste, pollution, poverty and war

This state of non-science not only means the Electricity Authority fails to understand electrical systems. It also means the Electricity Authority is incapable of comprehending that all our electrical grids are primarily information systems. Thus it is incapable of promoting the moral (civic) use of this information. Indeed there is overwhelming evidence indicating that the Electricity Authority facilitates the fragmentation and privatization of this vital information in ways that endanger us all.

Evidence includes Electricity Authority education programmes such as this consultation document, Whatsmynumber, PowerSwitch etc plus the escalation of household debt and poverty since the institution of the Electricity Commission-Authority.

In particular its non-science means the Electricity Authority is, for instance, unable to comprehend that cars are electrical systems albeit 99.9% wasteful electrical systems in the case of cars with combustion engines. Worse, the Electricity Authority fails to comprehend that a car, like any vehicle, is its infrastructure. The construction and maintenance of the car infrastructure involves extremely wasteful and polluting electrical systems.

### **Example 3**

Footnote 9 page 11 illustrates that the Electricity Authority does not comprehend what an economy is.

An economy is a system of transaction involving frugality and stewardship of the flows and balances that sustain humankind. It thus involves deep moral purpose.

The Electricity Authority’s definition obscures and denies this moral imperative. It confuses an economy with what New Zealand has - a national transaction system of vast diseconomy i.e. a system founded in planned obsolescence and waste. See Q3.

The amoral culture and deceitful practices of the Electricity Authority are fundamentally hostile to the development of economy and associated honest accounting systems i.e. civics.

In the example of transport, the Electricity Authority has no motivation or means of quantifying the vast array of hidden state subsidies to the

car infrastructure or of comparing car and rail systems or evaluating the true cost of various battery technology. Similarly the Electricity Authority is based in Wellington and yet remains silent about the impending destruction of Wellington's trolley bus system and the city's vital need for light rail.

Another example of the Electricity Authority's promotion of deceitful accounting systems is its endorsement of the conflation of household charges for reticulation grids and reticulated 230v electrical products. This conflation is profoundly corrupt because over 90% of these products are Bulk-generated and retailed by just five privatized corporations who maximize their profits by stressing reticulation grids whereas grid owners maximize profits by minimizing stress to their grids.

The Electricity Authority then compounds this obscene accounting by enforcing a regime whereby householders have little choice but to sell their electrical product to their prime competitor for 8 cents per kWh in order to participate to their local grid. This large, powerful corporation can on-sell it in the same nanosecond for 30 cents per kWh. This transaction also enables the corporation to conserve their hydro-electric stores, contrive a national price peak and sell that stored kWh for 800% of the average national price.

The Electricity Authority is incapable of accounting for and conserving the vital planetary flows and balances that sustain humankind. As mentioned, it is designed to enable waste and pollution i.e. diseconomy, not economy. This is probably its most dangerous flaw.

In summary the Electricity Authority is an institution designed to prevent NZ citizens from making intelligent (sustainable) uses of our electrical potential. It is a pre-eminent obstacle to the mass civic use of our local and national electrical systems.

***Q3. What other issues might inhibit efficient mass participation?  
Please provide your reasons.***

The primary inhibition of our ability to use our electrical potential in intelligent ways in New Zealand is a severe lack of compassion as manifest in the prevalence of greed, fear and non-science. This psychopathy and related denial of the principles of physics is reflected in and afflicts all our information systems:

(1) Our English language is currently designed since the 18<sup>th</sup> century to enable the Combustion Revolution i.e. the belief that it is the divine right of the people of the Anglosphere to burn the biomass (living and fossilized) without care.

This delusion is summarized in the fatally flawed equation: *Energy = Fossil Fuels = Power = Electricity = Bulk-generated Electrical Products.*

This use of English simultaneously reflects/generates unsustainable behaviour in the user. In particular it means we do not have the language required to enable intelligent uses of our electrical potential. Everything tends to unravel in unsustainable ways from these delusional premises.

(2) Our media, including our schools, universities and Government institutions propagate the above non-science and compounds the prevailing unsustainable notions of the nature of energy.

(3) Endemic corruption of NZ accounting and electoral processes. For instance, the major issue of the 2011 General Election was the proposal to privatize Meridian Energy, Genesis Energy and Mighty River Power. Millions of dollars of state funds were funneled through the Electricity Authority using wall-to-wall propaganda in all media promoting the privatization option and framing out discussion of the rights of citizens to participate in intelligent ways in the national trade of electrical products.

(4) The 1986 Commerce Act gives private corporations effective ownership of public carriageways. Communities no longer have affective rights to design and coordinate the construction of electrical grids such as 230v, telecommunication and transport electrical systems. The legislation enables psychopathic corporations to over-ride and pre-empt community councils' plans to use carriageways and electrical grids in intelligent, sustainable ways.

(5) The 1992-93 Electricity Industry Reform legislation effectively makes it illegal for communities to use their electrical potential in sustainable ways. This legislation is designed to confound energy efficiency practice. For instance, MEDs and Power Boards could no longer use their funds to reduce peak loads by insulating dwellings in their community because this law deems it to be illegal "cross-subsidization".

Similarly under this repressive regime MEDs and Power Boards now risked penalties if they shared data with members of the community (households, businesses, charities etc) that could be used to improve their efficiency because this could be seen to reduce the legally mandated profits of MEDs and Power Boards.

This effective national ban on energy efficiency practice was manifest in the break-up and, in many regions, the demolition of the ripple control system used to reduce peak demand.

The legislation also enforced the fragmentation and privatization of the information of electrical grids, thereby destroying much of its sustaining wealth potential.

(6) The 1998 Electricity Industry Reform legislation effectively disenfranchises all New Zealanders. Prior to 1986 the local electrical grids described in this legislation were owned freehold by their local community. All members of voting age retained the right to vote

tri-annually how the their local grid and its information was used, including how the information could be used to participate in national markets, minimize peak loads and enhance welfare.

Not one NZ community owns the information of their local grid this century. The 1998 legislation completes the fragmentation and privatization of the information of the described local electrical grids. In so doing the 1998 legislation decimates the sustaining potential of this vital information and destroys local democracy. The consequent accumulated loss of community wealth is already in the order of \$ billions x10. This loss will compound with the escalating costs of mineral destruction, pollution and debt maintenance.

(7) As suggested, the institution of the Electricity Commission-Authority is, by design, a major obstacle. It is designed to enforce all the above obstacles and ensure they are imbedded in both the general consciousness of citizens and in our national technology. It has been most effective in achieving its true goals. Examples include:

- \* The Electricity Authority has re-written history and rigidly confined national discourse of our use of electrical potential as described above.

- \* The Electricity Authority ensures that the components of imported "smart meters" are removed or disabled that might enable citizens to make intelligent use of our electrical potential.

- \* In 2011 the Electricity Authority decreed that all the information of the dwellings main interface with the local grid (the meter) belongs to private corporations, not to citizens. Thus, for instance, when I installed a small (2 kWh) photovoltaic I had to buy a dual meter built to Meridian Energy's design in order to remain connected to my local Wellington grid. I, not Meridian Energy, had to buy the meter plus pay for its installation and its compliance costs.

Even though I personally paid for the meter, I have no say over its design. I cannot use it to communicate data to third parties such as my local council, advisory service, hospital or other such agency. I worked as a meter reader for two decades and it is unintelligible to me and all the electricians I have spoken to. Two years after its installation I discovered Meridian Energy had illegally installed a modem in it against my express instructions. They did remove it but not before trying to insist I pay \$160 for its removal.

- \* The Electricity Authority insists on dual meter for dwellings. This is symptomatic of our Anglosphere dualist culture. This dualism tends to generate the state of non-science I have alluded to. It is characterized by linear, myopic policy. Technology arising from this state of non-science tends to be destructive.

When the non-science is manifest in potent devices such as a dwelling

electrical meter, it tends to generate massive blocks to democratic practice, true competition and the holistic use of our electrical potential.

Note: the dwelling's meter is a very potent device because the controller of the meter design effectively controls much of the design and use of both the dwelling and most of its appliances. Certainly the householder can purchase supplementary metering at considerable cost but this is not integral to the essential dwelling-local grid interface. The need to pay for a supplementary meter is more like to convince the householder to cut their losses and disconnect from their local grid.

The dwelling meter is best understood as an information switch rather than a measuring device. Dual meters switches off our communal consciousness to a vast array of sustaining possibilities. Ultimately, as we see in New Zealand, the structure of a society becomes governed by the obsessive measurement and pricing of a few (Bulk-generated) electrical products. This obsession with prices results in the loss of ability to value life in general. In particular sunlight is devalued. Greed and deceit prevail.

By contrast reversible meters on dwellings generate radically different communal consciousness. They tend to:

- promote stewardship;
- strengthen community;
- encourage local democracy;
- enable scientific uses of all local resources;
- and mass participation in markets for electrical products, or if you prefer, mass participation in the community and national trades in electrical potential difference.

This scientific culture arises because reversible meters reduce the obsessive focus on the price of a few products and instead encourages the holistic appreciation of all manner of electrical systems. The local grid has to be configured to include information of local climate variation and local resources, building situation and design, appliance design and use, transport/communication systems etc. All this involves the informed scientific consent of all citizens. The grids, locally and nationally, fail without these requisites, which is why the continuous, open community debate of objectives is an essential component of true and sustainable mass participation in the grids under the Electricity Commission's jurisdiction.

(8) All the above inhibitions arise from the greed and cruelty of a few people and inculcate distrust and fear in the mass of the people. The disenfranchisement described above has engendered widespread distrust and profound alienation from our local electrical grids. Private corporations trade people as though they are "cabbages" (TransAlta's description of New Zealanders) and in the decade 1993 - 2003 a million

people were traded without their consent.

My informal surveys indicate over 90% of people in the Wellington region have no idea who owns their local 230v grid and most are shocked to learn who they trusted with their lives.

The alienation of people from their electrical grids is accompanied by sensations of disempowerment. This is occurring on three levels.

(1) Already increasing numbers of the most disempowered people are effectively disconnected from their local electrical grid through homelessness, greedy rentiers and poverty in general. A large portion of New Zealand dwellings are basically thermal shacks. This group tends to live in the worst of them.

(2) Those surviving on the medium household incomes, which is the majority of New Zealanders, intuitively sense the psychopathic nature of our modern private corporations.

In the short term the psychopathic oligarchy controlling these uncivil institutions can gain short-term financial benefit from engendering fear in people. However this majority - loosely described as lower-middle income people - now have powerful motivation to completely disconnect from the electrical grids described in this consultation paper. The reasons are many:

- They are becoming informed enough that the information of the grids is being used to exploit and abuse them.

- They are informed enough to know that the private owners of the grids do not care and they configure the grids as debt-generation, tax avoidance and money laundering devices. Such information is only a touch of a button away now e.g.

[https://en.wikipedia.org/wiki/Li\\_Ka-shing](https://en.wikipedia.org/wiki/Li_Ka-shing)

(principle owner of the Wellington regions electrical potential.)

- They are informed that even small climate and terrestrial events can now disable New Zealand electrical grids on scale. Those comprehending the impacts of human pollution on the atmosphere understand the increasing probability of floods, ice storms, wet snow events and firestorms could severely disable both local and national electrical grids.

- Above all, nearly all members of this income group, the majority of New Zealanders, are informed of how the confluence of dwelling electrical systems ( 230v, optic fibre, wifi, cellular phones etc) means vital information enabling their dwelling is now highly vulnerable to hacking, manipulation, exploitation, disabling and destruction. Arguably the Electricity Authority promotes ransom-ware by our private corporations, even if its officials do not understand how.

### **Case study 1**

See <http://truehope.info/wordpress/dangerous-connections> - an account of how someone hacked the electrical systems of my home and began stealing data blocks at the rate of \$30 a day.

The private corporation providing my broadband did not care and said it

was helpless.

It is impossible to contact Wellington Electricity ( Sir Ka-Shing Li) for help.

The suppliers of household appliances have no knowledge of their information potential (chips, wifi etc).

Faced with the prospect of thefts of \$12000 a year or more, our household had to disconnect our Photovoltaic Enphase monitor, PCs, Laptops, tablets, heatpump and other devices linking to electrical systems such as optic fibre cables, wireless broadcast and the Meridian Energy controlled dwelling meter.

## **Case Study 2**

The Kaikoura earthquake triggered a tsunami alert in our region. I am involved with the local refuge centre, which could have provided vital shelter for many of the thousands of displaced people in the event a mass evacuation had occurred. It has a 4 kW PV array - enough to sustain lighting and some communication.

My home has a 2 kW PV array capable of running my 0.5 kW radio station, which can be heard over an area inhabited by 30,000 people in the affected area.

However the 230v systems of both my home and the refuge centre are configured to serve the psychopathy of private corporations. Fortunately the tsunami were minor. Otherwise we would have been in the dark and voiceless at a time of major social trauma because of the psychopathic nature of our electrical grids and the Government agencies controlling their design and use.

It is now conceivable that many of these lower-middle income households with little or no disposable income may be forced to disconnect from their local grid in order to survive. The danger of crippling hacks will become too great. Some may also take their cue from the Electricity Commission's uncivil ethos, which puts zero value on compassion and community.

Note: studies in Australia indicate PV use is most intense in lower-middle income postal codes.

(3) Traditionally the richest 10-15% of New Zealanders have not cared for people. Bills for Bulk-generated electrical products are only a tiny fraction of their income. Some even increase their wasteful use in times of shortage in times of national shortages to embarrass political opponents, promote privatization of grids and simply because they can while the poor cannot.

However it is slowly dawning on this group that our electrical grids are primarily information systems and the current regime means their private information can now easily be logged and exploited on scale. These rich people can easily afford to go "off-grid" and they are now becoming very motivated to disconnect their dwellings because of privacy concerns.

***Q4. What is your view of the opportunities for network businesses to obtain external help to provide aspects of the network service using competition or market mechanisms?***

This question is impossible to answer in a meaningful way because this consultation document fails to define "competition" and "market". Analysis of the text indicates the Electricity Authority defines competition as the ability of NZ citizens to choose between five manufacturers and retailers of almost identical Bulk-generated electrical products. It is clear the Electricity Authority does not define competition as the ability of citizens to choose between a wide range of technology and make a wide range of uses of it in democratic, cooperative ways to ensure the welfare of all citizens.

The same analysis indicates the Electricity Authority defines "market" as a trading system controlled by and existing primarily for the benefit of the principle shareholders of the above five corporations. The structure of this oligarchic, highly centralized market reflects the structure of the global market. Most global transactions are controlled by 6-8 Anglosphere corporations see <https://vimeo.com/209281790> *The Pollution -English Connection*

Note: this video connects the physics of our language use with the physics of swarm behaviour. The video shows that the exclusive, greed-driven notions of "competition" and "market" promulgated by the Electricity Authority are a recipe for the catastrophe I alluded to in my response to Q1.

In brief, for all the reasons given above, the Electricity Authority regime is fundamentally hostile to the intelligent (sustainable) use of our national and local electrical potential. Even communities that still own the nuts, bolts, wires, poles of their local grid are rendered dumb by the legislation. Current national legislation with its imperatives for diseconomy means grid connection is now a high-risk activity for New Zealanders.

***Q5. What do you think are the main challenges to be dealt with to increase the use of competition in supplying network services? What are your reasons?***

See answers to Q1-Q4 In brief:

Lack of compassion (greed, diseconomy, cruelty, fear and distrust)

Unsustainable English language (NZ's dominant language)

Endemic corruption and deceitful accounting practice.

Widespread non-science and disempowerment of citizens

***Q6. What is your view on whether open access is required and what would be the elements for an effective open access***

## ***elements framework?***

To reiterate my response to Q1: the physics of our situation is such that this catastrophe can only be avoided by enabling all humans being able to make intelligent uses of our electrical potential at every level - individual, community, national and global.

More discussion at

<http://truehope.info/wordpress/great-solar-electrical-era>

The essential elements required are trust and the scientific, democratic involvement of all citizens in their local electrical grids. The MED-Power Board structure that prevailed in New Zealand for the half century 1930-1980 provides a world-leading exemplar of how this can be achieved. This cooperative, community-based system arose from the failure of private corporations to provide civil services and from people's experiences of the terrible deprivation of warfare and "the Robber Barons" (The Depression). The ethos of the Electricity Authority is really just a return to the unsustainable, feudal ethos that prevailed in the period 1890s -1920s.

### **The vital role of trust**

The establishment of this national cooperative network of grids was largely an exercise in building community trust - most New Zealand citizens were rural and had good reason to distrust centralized grids and Bulk-generated products. The system was enabled by an informal social contract whereby citizens retained rights to vote how the information of their local grid was used.

<http://truehope.info/wordpress/national-community-network>

The Electricity Industry Reform legislation (1986-) is a vast betrayal of this informal social contract and must be repealed if New Zealand is to cease to be a disproportionate threat to humankind. Open access for all citizens is essential and our historic nationally integrated, community model provides a proven mechanism for ensuring it is a civil process. Such democratic community based systems provide our best hope of ensuring that our use of solid state devices (data loggers, computers, meters etc), "Digital" code, optic fibre, cellular radio, transport and other innovation all work in an integrated way to facilitate sustainable lifestyles for all citizens.

However the Electricity Industry Reform legislation (1986-) and the Electricity Commission have generated the widespread fear and distrust I have alluded to. These inhibitions have to be allayed. This time the social contract must be formalized in a bill of rights that

(a) conserves the sustaining potential of our electrical grids

(b) enshrines the rights and responsibilities of all citizens using the grids.

This will necessarily involve the repeal of the repressive Electricity

Industry Reform legislation, the dismantling of psychopathic

corporations, a major review of our education system and subsuming of the Electricity Authority into an Office charged with maintaining an

over-view of our electrical potential and with enforcing the Bill of Rights.

**Q7. How effective are the existing arrangements for open access? What are the problems?**

Existing arrangements, including the nature of the Electricity Authority, effectively bar all citizens from open access. This is the overwhelming problem and it constitutes an existential threat to us all.

**Q8. What type of distributor behaviours and outcomes should the Authority focus on to understand whether changes are required to support open access?**

The Electricity Authority must inform the public that its structure is unsustainable, as is our national education system and legislation that informs it. All lack science and destroy the democratic state required for us to make sustainable uses of our electrical, solar, carbon and other vital potential.

**Q9. What changes to existing arrangements might be required to enable peer-to-peer electricity exchange?**

See changes suggested in response to Q6 and Q8

**Q10. What are the costs and the benefits of enabling peer-to-peer electricity exchange?**

The benefits are incalculable if the exchange is governed in scientific (democratic) ways.

The question is better framed, "What are the costs of not enabling sustainable peer-peer exchanges of the electrical products alluded to in this document?" The physics of our situation suggests catastrophic social breakdown must occur if human kind (7 billion beings) does not adopt such scientific peer-peer systems. Already many societies are attempting to create such systems despite the hostility of the Anglosphere. New Zealand, already an inequal, unsustainable society, is now at major risk of missing out on a whole raft of wealth enabling technologies and associated know-how. For example, the functions of my Enphase system are limited because it is outside US borders. Recently it ceased logging the most basic information and I know of no local agency that can advise me how to reboot the system.

**Q11. What is your view of the possibility for, and impact of, any current or future blurring of participant type? What are your reasons?**

I do not understand this question.

All New Zealand citizens are described as participants in the list of participants.

All New Zealanders are participants anyway by virtue of the fact they use our national electrical potential in one or more of our electrical systems. The question implies the list is corrupt.

If we assume the list is honest, then there is no blurring of the act of

universal participation. Rather there is blurring of the relative state of science and non-science that prevails in participation. This blurring obscures the degree of democracy that citizens enjoy. In brief, the current list blurs the fact that our national and local electrical grids of all types are configured to benefit a few people at the expense of the majority of us.

***Q12. What types of participation are or might be prevented because the party is not recognised as a participant? What are the potential impacts?***

Democratic community-owned grid cooperatives are banned from participation. In brief, the probable impact of this repression of civic rights is dystopia.

***Q13. What challenges might new forms of generation, such as virtual power plants, or small and dispersed generators, face in entering the market?***

This question is non-science.

Human beings do not and cannot generate the universal potential (energy) -see the Conservation of Energy Principle. We can however transform it. For instance, we, like most life forms, can transform the electrical potential of sunlight into electrical forms (products) that enable us to conserve our thermal, gravitational, chemical and other balances. The conflation of generation and transformation is endemic in Anglosphere culture and works to deny the nature of the continuous universal transformation, of which we are all participants.

Power is the rate the universal potential (energy) is manifest. The notion of "virtual power plants" is, at best, confused and, at worst, psychotic.

It is however possible for citizens to use batteries, photovoltaic arrays, computers and other technology to make a civil contribution to the electrical grids, including those described in this document. Valuable sustaining electrical potentials can be conserved that benefit the wider community. This requires democratic market structures and currently New Zealand does not have these. Instead we have a mirror of global stock markets - transaction mechanisms controlled by a brutal oligarchy using unjust legislation, insider trading, currency speculation, copyright, super-computers and very sophisticated algorithms.

In brief, innovative citizens risk having their households severely disrupted, if not bankrupted, by engaging in such corrupt markets.

***Q14. What changes might be required to the rule book to facilitate the emergence of virtual power plants or demand response?***

This is also a non-science question, which further proves the Electricity

Authority is unsustainable.

I will make one suggestion:

If [https://en.wikipedia.org/wiki/New\\_Zealand\\_electricity\\_market](https://en.wikipedia.org/wiki/New_Zealand_electricity_market) is correct and a 30 minute settlement period still exists, then we should set a program in place to enable 5 minute settlement periods. Intelligent dwelling-based battery systems have great sustaining potential and work to enhance the local scientific state, which includes democracy. Also batteries can have sustaining potential when sited on farms and in factories manufacturing sustainable products. Shorter settlement periods such as 6 minute periods are more conducive to investment in this vital technology.

Note: the vastly inefficient nature of car infrastructure and associated destruction of minerals, pollution etc destroys the sustaining potential of batteries when used in vehicles.

**Q15. Would the functioning of the market for hedges and PPAs and the availability of finance be improved if there were greater transparency of long term prices and greater standardisation of terms and conditions for long-term contracts?**

See response to Q13 and the corrupt state of global transactions. In brief, derivatives systems generate the lethal delusional rationales and behaviour that has generated an extremely dangerous Anthropocene (see Q1). Globally institutions like the Electricity Authority have created a \$US1.5 quadrillion time bomb in derivatives that have no real collateral. They are complete non-science.

The only true enabler of wealth is the state of science and democracy.

Footnote: this submission is not grammar checked and I am diplopic i.e. I struggle to read what I write. I hope to clarify and illustrate this submission on [www.truehope.info](http://www.truehope.info)

Thank you for consulting us.

In compassion,  
Dave McArthur.