

National Energy Efficiency Network

1. Introduction

I am very pleased to be at this gathering today and address you briefly this morning. Gareth suggested I speak about, and I quote (I hope he doesn't mind) *'God's creation and the signs of our times and our call as Christians to respond to these challenges. We see costs of energy, the ecological moral imperative and the spiritual dimension, environmental impacts, leadership failure, increased societal needs as things we can all respond to. If you can comment on other faiths perspectives that will also be most welcome.'* I thought that might take us to lunch so I want to try a slightly different tact by offering a brief reflection on the theme of energy.

2. Energy as capacity for work

The concept of energy can be traced back to Aristotle. It means essentially the capacity to do work. Energy is the ability to do work on objects and necessarily involves movement and action. This involves movement and transformation. With the advent of modern science the idea of 'conservation of energy' arose – energy can be neither created nor destroyed by itself but only transformed, (First Law of Thermodynamics). The process of transformation of energy led to the Second Law of Thermodynamics, that is *entropy* (from Greek *tropé* meaning 'transformation'). This posits that energy tends to dissipate in extensity, that is, become more evenly distributed across the universe. However, the laws of thermodynamics presume

a closed system, which lacks the capacity for self-replenishment and creation of new energy.

3. An Energy Abundant Universe

Some theologians have observed that 'there are developments in modern science such as the recognition of randomness, chance and chaos that suggest that 'the fundamental state of the universe is non-equilibrial'. It raises a question: 'What if all the randomness and the constraints point to an inexhaustible capacity for richness, complexity, and order continually transcending itself?' They conclude that 'it seems more in accord with the overall picture of reality to see the universe as an abundant allowance of space, time and energy through which new abundance can happen'.

The supposition of an energy abundant universe that does not operate in a closed system resonates with a theological vision of a universe. The source of this vision lies in the indeterminable and infinitely expansive working (energetics) of God (John 5.17). This leads to the possibility of endless capacity for self-replenishment and creation of new sources of energy and consequent capacity to do work and effect change (John 14.12).

4. God's Attractive Energy

A theologian mentor of mine the late Daniel Hardy stated that:

there is an ordered energy that is perpetually self-generating and fully self-replenishing all the time. We use labels like 'ordered energy', or 'word in spirit', 'Trinity', or 'God', but these are not just labels for something that is there. They name that which of its nature is infinite, endless and expansive, to which the only possible response is not to name it but to follow it into the depths. You can say of it only that it is what attracts.

Hardy wants to speak about the inbuilt created attraction of all things towards God. Attraction to others 'characterizes the inherent sociality of all creation'. Long before humans fabricate and construct social processes to generate and shape relations there is a condition of 'towardness', which is 'even more basic than creation and redemption', such that one 'cannot expunge towardness from the condition of things'. The movement towards others and all things towards God is a fundamental constituent of the created order. It is Divine energy at work at the heart of things.

5. God's Creative Energy

It is there at the beginning of the Book of Genesis – the Holy Energy (Ruach, wind, Spirit) of God brooded over the face of the waters. God is energy, divine energy, and the early chapters of the book of Genesis of the Hebrew Scriptures offer a poetic prose account of the unfolding of God's creative work that brings forth a remarkable, energy filled universe, beautifully differentiated and ordered. Everything is connected and interdependent – vegetation and plants, sea creatures, birds and then land animals to human beings. There is

a single elaborate network of interdependency and at every level it is expected that all will be fruitful and multiply. Human beings come last in this network of life and are made in the image of God. Evidently being in the image of God involves being inter-related with all that has come before. The Genesis account points to the fact that all of creation is expected to participate in the unfolding work (energy) of God, being fruitful and multiplying. This interdependence is reflected clearly in Genesis 2, where the human, *adam*, is created from the ground (or to echo the Hebrew, the humus), *adamah*. The most accurate rendering for humans in Genesis is 'groundling' or 'earthling'.

6. Energy: working with or against the universe

This dilemma is highlighted in the injunction in Genesis to 'fill the earth and subdue it'; to 'have dominion over..... every living thing'. The English translation of the Hebrew into 'subdue' and 'have dominion' is easily misunderstood as an invitation to dominate and empty the earth of its energy. More accurately it points to our active participation in the development and flourishing of the earth. In this way we 'go with the flow' of energy rather than against it. We humans are called to work with creation and join in the ebb and flow and fruitfulness of creation. We are to work with and not against the creation. This is where I would locate the concept of 'efficiency' i.e. working with the energy flow of creation and society. New Technology has an important contribution to make to enable the achievement of energy efficiency.

The problem arises when we humans stand over against creation and treat the creation as an object separate from human life we forget our interdependence with the earth and its life. We no longer function as gardeners and stewards in the garden of creation, the image of creation presented in Genesis 2. Instead we become more extractors and plunderers of the earth and less responsible servants of God. Energy becomes something we use recklessly as if we had an inexhaustible supply that we can simply suck up without giving back. Basically we forget we are part of the energy cycle. We presume to stand outside it, we see ourselves as users not contributors and in the process we become abusers. This occurs when we become obsessed with our own well being apart from others and the creation. An energy abundant universe is not there for the taking; we are a part of it and have to act in ways that contribute to the ongoing abundance.

When we don't the results are only to apparent: energy costs spiral, leadership that is in league with big business and reluctant to make the shifts required to become more in harmony and respectful of creation and release energy for others; ecological results of human over consumption and wasted energy that always comes back to bite us. The world's religions have remarkably similar assessments of our present crisis and remarkably similar views about the need for achieving more efficient energy usage and the importance of renewables.

And in our personal lives and in our communities we know what it means today to be exhausted, without energy. As consumers we have exhausted ourselves and we too seek renewal of our energies. A

National Energy Efficiency Network might span an even greater spectrum than ordinarily thought: ecological, human use of energy in our built environments, in the dynamics of our social and personal lives. Energy efficiency is relevant across the board and that is why this gathering today is important and also why it has to be a network which is national. We are all connected and my waste of energy means someone else or some other part of the world is the poorer. 'Energy efficiency' ought to be interpreted in its widest sense to include God, the world, human life and that element that inheres in all of this i.e. spiritual energy. Perhaps what we need is a truly holistic approach to energy efficiency. This of course is a moral and ethical challenge. It's also probably the right place for me to hand back to our Chair.

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