1. A Catholic energy ethic

Energy is an essential dimension of life that calls for theological and ethical reflection. This is true not only because humanity’s use of energy is massively impacting the world’s shared ecologies and economies. The massive impact of human energy use indeed demands moral reflection on the scope of human power. The fact of human geological agency is inscribed in the new geological term for our time, a time in which human influence redefines earth’s very contours: the Anthropocene. In the Anthropocene, ethical decisions are critically needed to limit the harm energy can do while ensuring that energy remains a blessing and benefit for all.

Even more fundamentally, however, energy is a proper topic for theological reflection because energy is an expression of divine providence, human ingenuity, and social priorities. Catholic theology is absolutely theocentric, rooted in the Abrahamic scriptural tradition which begins before all time with God’s creation of the universe. From this perspective, human agency belongs within God’s providential plan for creation (Catechism of the Catholic Church, 358), even the geological agency of our time (Lothes Biviano 2015). Humanity’s agency over energy is no exception. Energy, whether produced from fire, fuel, or modern technology, results from the earth’s resources and human ingenuity. From a Catholic perspective, the earth’s resources and human ingenuity are both gifts of God the Creator, gifts intended for the benefit of all in the economy of salvation. Energy should therefore be used in a spirit of gratitude, honoring the Creator’s providence, which has gifted the earth with abundant resources meant to support life for all.

A spirit of gratitude for energy thus inspires a Catholic energy ethic, and orients ethical decisions about energy’s production and use to the end of a flourishing human and ecological community. Simply stated, the ben-
efits and burdens of energy should be allocated to provide for the needs and wellbeing of all. As the *Compendium of Social Doctrine of the Church* states,

> God gave the earth to the whole human race for the sustenance of all its members, without excluding or favouring anyone. This is the *foundation of the universal destination of the earth’s goods*. The earth, by reason of its fruitfulness and its capacity to satisfy human needs, is God’s first gift for the sustenance of human life [361]. The human person cannot do without the material goods that correspond to his primary needs and constitute the basic conditions for his existence. (*Compendium*, 171)

Magisterial teaching affirms that the gift of the earth is intended not just for human use, but for the good of all living communities, all creatures and plants and elements of the ecosystems. Pope Francis notes the teaching of Saint John Paul II about this issue.

> In his first Encyclical he warned that human beings frequently seem “to see no other meaning in their natural environment than what serves for immediate use and consumption”. With full respect for the human person, [authentic human development] must also be concerned for the world around us and “take into account the nature of each being and of its mutual connection in an ordered system”. (*Laudato Si’*, 5)

More complex and comprehensive statements of the principles and criteria that should guide social decisions are articulated in the tradition of Catholic social thought (*Compendium* 2005), which is developing new paradigms through application to the specific problems of energy (*Energy, Justice and Peace* 2014; Lothes Biviano et al. 2015). This comment intends to contribute to the developing paradigm of a Catholic energy ethic primarily by reflecting upon its theological context, acknowledging that a theology of energy which addresses fundamental questions of meaning and morals (Gilkey 1981) grounds and complements an energy ethic (on defining morals, ethic, and ethics, see Gula 1989).

### 2. ENERGY DECISIONS AS ETHICAL DECISIONS

Increasingly, discussions of energy decisions in both faith-based and secular settings attend to the ethical dimensions that overlay the economic or technical aspects of energy (Rasmussen 1996, 2011; Sovacool 2013, 2014; CIDCE 2017; Lenferna et al. 2017; AAAS 2018; C2G2 2018). Energy decisions are ethical decisions because they impact the health and wellbeing of
persons and communities, affect ecosystems and economies, and influence global climatic and social stability. An energy ethic recognizes that energy decisions have profound implications for affordable energy access, sustainable economies, healthy environments, geopolitical stability and the promotion of peace. Energy ethics emerge from the interlinkage of individual decisions with systemic structures, with wide social and ecological impacts in a globalized world.

Energy decisions typically involve great complexity, multiple stakeholders, and regional diversity. In diverse contexts, competing claims for resources and investment may have validity. The uncertainty of future technologies, as well as the changing social context for energy systems, mean that utilitarian and blanket assessments cannot be easily made. Furthermore, climate stability involves many qualitative goods that are difficult to compare directly, but have high stakes, such as cultural preservation.

In the face of these complexities, uncertainties, and high stakes, religious values serve to orient discussions toward the common good. The ethical analyses inspired by religious values provide criteria that can clarify the moral validity and relative priority of competing claims for societal resources. Even more significantly, religious moral visions offer a compelling invitation to incorporate energy decisions within the moral actor’s personal faith identity and deepest sense of self. In this way energy decisions are reframed as expressions of faith inviting conscientious and communal reflection and opportunities for meaningful self-expression. As expressions of faith rooted in shared religious values, energy decisions invite broader participation and commitment in a community context that may transcend the explosive minefield of divisive politics.

Religiously inspired energy ethics participate in a rich interfaith-environmental dialogue, while also expressing confessional specificity (Lothes Biviano 2016a). Diverse religious worldviews and values construe foundational defenses of life, health, and wellbeing through the richness of their traditional texts, symbols, and rituals, offering a “thick description” of human meaning and purpose that empowers comprehensive ethical direction. These values have the potential to critique the cultural habits complicit in environmental challenges, acknowledge the limits and possibilities of human responsibility, and creatively open new cultural possibilities (Rasmussen 1996; Jenkins 2013).

A shared commitment to the common good marks most religious and secular ethics. Religions further contribute traditional norms and narratives, the specific vocabulary and analytic criteria of their particular ethical commitments, and comprehensive moral visions. In this comment, I will set forth a sacramental framework which grounds the fundamental religious
commitments for a Catholic energy ethic, and briefly reference commitments and criteria from Catholic social teaching that enable ethical assessments of energy issues.

3. FOUNDATIONAL COMMITMENTS: A SACRAMENTAL ECONOMY OF CREATION

The explicit contribution of the Catholic tradition is a properly theological framework rooted in the doctrine of Creation, with three foci emphasizing the sovereignty and graciousness of God the Creator, the dignity of the human person as created in imago Dei, and the solidarity of the human family and family of all the living in the covenant of creation. Each focus lends a particular character to a Catholic theology and ethic of energy. The specific contribution of Catholic energy ethics among monotheistic faiths is a Trinitarian theology which places all Creation in a relational narrative with a salvation teleology. Particular among Christian confessions, a Catholic theology of energy invites reflection upon the sacramental nature of the energy exchanges which occur within these covenantal relationships.

3.1. Divine providence and the goods of creation

A Catholic theology of energy is theocentric, oriented to God’s plan of creation, salvation and the wellbeing of creation. Reflection upon energy exchanges as having a sacramental quality draws depth from discussions of the sacramental economy and the cosmos as the primordial sacrament. The dynamics of a sacramental economy of Creation are illustrated by Fr. Edward Obi, OP as a dynamics with three movements. The sacramental economy originates in the creation of the cosmos by God, gifting the earth with goods for our provision and salvation; continues in communion among fellow-creatures who share a covenant of mutual help and responsibility; and returns to God via the response of creaturely praise (Obi 2010). These three movements thus embrace the three foci stated above: divine providence and creativity, human dignity and responsibility, and social relationships.

A theological interpretation of the earth as primordial sacrament affirms the sacramental principle that all grace is mediated through creation and created gifts. This interpretation also affirms the dependence of all upon the gifts which the earth, the primordial sacrament, provides.
(McDougall 2003). As “primordial sacrament”, the earth is primordial home, table and temple, providing shelter, nourishment, and inspiration for praise (Psalm 19). The dignity of creatures establishes their primordial right to creation’s integrity, which in turn protects personal integrity. Catholic social teaching expresses this as the right to the material conditions needed to ensure dignity, a right that is shared with all, as expressed by the universal destination of goods. All creatures belong to the earth – as the very name Adam proclaims (Hebrew, adamah: earth creature); and so all have equal claim on its abundance, and even greater claim to equal shares of its scarce resources.

3.2. Communion as fellow creatures and human dignity: the ground of covenantal ethical responsibility

A Catholic energy ethic is covenantal, acknowledging that humanity’s unique dignity confers mutual rights and responsibilities to all persons as brothers and sisters. Corresponding with these rights are responsibilities to care for creation, which Scripture confirms as humanity’s primary vocation: to serve and tend the garden (Genesis 2:15). From the covenant established between God and humanity, and between members of the human family, follow responsibilities to care for one other (Clifford 1988; Jenkins 2009). Care and concern are due to all because of their common dignity as creatures. The creation narratives establish Catholic social teaching’s commitment to human dignity of each person, who necessarily exist in community, reflecting the Trinitarian understanding that “communion is at the heart of the divine mystery”.

As John Paul II states in Sollicitudo rei socialis, interdependence is a “system determining relationships in the contemporary world”, and solidarity is the “correlative response as a moral and social attitude [...] solidarity helps us see the ‘other’ as our ‘neighbor’, a ‘helper’ (Gen 2:18-20)” (Sollicitudo rei socialis 38). These responsibilities to the neighbor are mediated by energy decisions that have real impacts through our shared global systems – economic, social, political, ecological and climatic systems.

3.3. Social relationships: solidarity with all families of life

A Catholic energy ethic is social, recognizing that the integral development of persons occurs in family, community, and society. Indeed, integral development includes ecological communities extending across the globe,
an insight of St. Francis of Assisi that has long been honored by the Church (*Laudato Si’*). These covenantal responsibilities extend to the living families of flora and fauna who also have intrinsic value, exist in inescapable interdependence with humanity, and themselves “give glory to God”. Thus, the values and commitments that shape a Catholic energy ethic flow from the doctrine of creation, which views all relationships within a covenantal economy of creation and salvation.

Energy exchange involves the production, purchase, and the provision of energy via policy and patterns of investment. Because the concrete exchanges of energy take place within larger energy systems that publicly enact social, political, and economic relationships, including relationships of power and scarcity, such energy exchanges embody the relationships between neighbors. When these energy exchanges make evident a commitment to energy access that is clean, affordable, and sustainable, such energy exchanges make visible our commitments to energy access, commitments which are grounded in love and charity for the neighbor (1981). As such, the sacramental quality of love of neighbor can be made evident through these very exchanges.

### 4. PRINCIPLES AND CRITERIA FOR ENERGY ETHICS

These responsibilities can be viewed in a continuum from minimum negative obligations to positive duties. In an age of ecological degradation which threatens water supplies, reduces agricultural productivity, and erodes homelands, ensuring these essential material conditions requires that the earth’s natural fruitfulness be safeguarded, as the condition of possibility for providing sustenance. This implies a (positive) right to the fertility of the earth, to “natural nature” (Peppard 2011) that accepts creation’s natural chaos. Preserving the essential conditions for earth’s fertility also implies a (negative) right to immunity from anthropogenic ecological interference.

Negative obligations stem from solidarity’s duty to preserve creation’s integrity as the source of beauty and material goods needed by all. The first negative obligation is to do no harm. Yet recognizing that energy supports life, until renewable energy is more widely available, Catholic teaching recognizes that in many cases polluting fossil fuels remain the only option for energy (*Laudato Si’* 165).

How then to view fossil fuel use as the global economy transitions to a decarbonized economy? As V. Ramanathan writes in his contribution to a Pontifical Academy of Sciences conference on energy, “access to
modern forms of fossil fuel energy is a fundamental necessity for human development and well-being” (Ramanathan 2014). Construed as a form of self-defense for the poor, such polluting energy is justified in transitional times. Nonetheless, to safeguard the integrity of nature’s sacred order, the conditions under which the earth flourishes as primordial sacrament, shelter, table, and temple, the shift to low-carbon energy must be planned and funded (Lothes Biviano 2016b).

The Catholic tradition emphasizes that rights are not simply negative freedoms from coercion and from interference, but in fact include positive duties correlating with obligations. Positively, Catholic social teaching asserts the obligation to dismantle structures of the fossil fuel economy and invest in new and sustainable energy technologies (Peace 2014). Laudato Si’ teaches that “technology based on the use of highly polluting fossil fuels – especially coal, but also oil and, to a lesser degree, gas – needs to be progressively replaced without delay” (165). This complex task is part of our vocation to protect God’s handiwork as “an essential task of virtue”, one that is “neither optional nor secondary” (217).

Regarding the critical obligation of advanced countries to develop “the most complex and capital-intensive energy technologies” (Laudato Si’ 52), and recognizing the limits of the global carbon budget, “the conventional fossil fuels that remain within a safe global carbon budget must be directed toward building a clean energy infrastructure” (Lothes Biviano et al. 2015, 12). In other words, there is a positive obligation to build a clean energy economy. For instance, Delucchi and Jacobson (2011) have showed that a transition to 100% renewable systems is a current possibility and, indeed, “energy is the necessary revolution for the present generation; and not only is it possible, its foundations are already present” (Lothes Biviano et al. 2015, 5). Fossil fuel economies are not inevitable forms of energy empowerment because it is not fossil fuels per se that are necessary but energy in general (power), which can be supplied through cleaner, more sustainable and renewable means.

As “Catholic Moral Traditions and Energy Ethics for the Twenty-first Century” identifies, further obligations are context-specific, but framed by core principles of Catholic energy ethics. Seven principles of a Catholic energy ethic are adumbrated below (Lothes Biviano et al. 2015).

1. Cherishing and protecting life as a gift from God.
2. Accepting an appropriate share of responsibility for the welfare of creation.
3. Living in solidarity with others for a common good, namely, the sustainability of an abundant earth.
4. Striving for justice in society.
5. Giving special attention to the needs of the poor and members of minority groups.
6. Widespread participation in decision-making processes.
7. Employing technological prudence.

These principles are rooted in the fundamental, covenantal commitment to solidarity that in modern form must recognize how energy intersects all forms of social, economic, technological, political and moral globalization (Himes 2008).

5. SPIRITUAL RESPONSES IN A SACRAMENTAL ECONOMY

Each person and community may discern in conscience their own path of action toward a clean energy economy, consistent with their particular identity as virtuous actors. Yet to take no action is no longer appropriate or ethical. Engaging some aspect of an energy ethic is essential in a morally globalized world in which almost every action creates implications for the purchase, use, and impact of energy.

Furthermore, the concrete actions that build a clean, sustainable, and healthy renewable economy have profound spiritual significance. Energy exchanges are tokens in a sacramental economy that proffer the reality of love they can express, when viewed through a religious lens that perceives the relationships that underlie the exchange of investments and actions. Such actions are the concrete realization of love of neighbor and the actualization of the preferential option for the poor.

Within these covenantal relationships, persons express responsibility for each other by ensuring access to the safe and clean energy which is essential. Viewed through a Catholic sacramental imagination, the social exchanges of energy aspire to their fulfillment in the love of neighbor whose summit is the Eucharist (Hollenbach 1977). The realization of love and justice through the social mediation of energy exchanges permits a sacramental consecration of acts of daily life, even energy purchasing and production, investments and infrastructure, so that they become visible signs of how we may better be our brothers and sisters’ keeper.

In conclusion: when these social relationships are honored by the establishment of fair, accessible, healthy energy systems that provide for the needs of all, energy exchanges can even be seen as the realization of neighbor love, and a means to peace and true prosperity.
REFERENCES


