

# Ohio Sustainable Energy Charter

## An Initiative of the Ohio Interfaith Climate and Energy Campaign

### Introduction

Scientists are convinced that global warming is occurring as a result of human activities that burn fossil fuels. Climate change is a religious issue as human-generated emissions are threatening life and the well-being on our planet. It is a moral issue since the impacts of climate change will be disproportionate on the poor, both locally and globally. However, if we act now we can mitigate the worst of the predicted impacts of climate change. The Ohio Interfaith Climate and Energy Campaign has members from Catholic, Jewish, Protestant and other diverse traditions and is part of a network of state campaigns coordinated nationally by the National Council of Churches and the Coalition on the Environment and Jewish Life. We advocate justice for the poor and protection of all life by taking action to address climate change and responsible energy stewardship. We are calling all Ohioans to take responsibility for the impacts our actions have on our neighbors and future generations by decreasing reliance on fossil fuels, using renewable energy and increasing energy efficiency.

### I. Impacts of Climate Change on Ohio

Burning of fossil fuels produces heat-trapping gases (predominantly carbon dioxide) that blankets the earth. Scientists are convinced this is warming the earth's climate and that negative impacts will worsen with time. The assessment of climate change by one hundred international climate scientists reviewing global data<sup>1</sup> is verified by nine of the 10 warmest years on record occurring since 1995<sup>2</sup>. Ohio's climate will grow considerably warmer and probably drier during this century. By 2100, temperatures are projected to rise on average 7–13 degrees fahrenheit, with extreme heat events more common<sup>3</sup>. The impacts of climate change include melting ice caps and higher ocean levels, more frequent storms and floods, and increased health risks associated with diseases and extreme temperatures.





Evidence suggests the climate of Ohio is already changing:

- winters are getting shorter, annual average temperatures are growing warmer,
- extreme heat events are occurring more frequently,
- duration of lake ice cover is decreasing as air and water temperatures rise, and
- heavy precipitation events, both rain and snow, are becoming more common.

## Act now, that you and your people might live and flourish

Deuteronomy 16:20

## Do justice, and love kindness, and walk humbly Micah 6:8

Ohioans will see global warming impact our economy (particularly agriculture), human health and natural resources.

**Impacts on agriculture.** Precipitation is predicted to increase in winter and the spring planting seasons, but be less in the summer, with soil moisture predicted to decline by 30 percent<sup>4</sup>. The expected high heat and severe storms and flooding during the planting season will likely depress crop yields (especially of soybeans), and summer irrigation will be needed. Extreme heat and drought can severely affect livestock health and production, and lower milk productivity and quality is expected<sup>5</sup>. Ozone damage to crops will be greater under high heat. Climate change may also create more favorable conditions for many pests and pathogens.

**Impacts on human health.** The extreme heat periods predicted by climate change models will increase the frequency and severity of pollution-related health risks<sup>6</sup>. High heat may also increase the formation of dangerous levels of ozone, which is known to irritate the respiratory system. Other air pollutants generated by coal-fired power plants in the region already exacerbate asthma and other respiratory diseases<sup>7</sup>. Waterborne infectious diseases may become more widespread and some tropical diseases expand their range into our region.

**Impacts on natural resources.** Protecting natural resources is a critical as healthy ecosystems will help mitigate the impacts of climate change<sup>8</sup>. Global warming will reduce the amount and quality of our wetlands and decrease fish populations and wildlife habitat. The severity and timing of flood pulses will reduce safe breeding sites for amphibians and waterfowl. Problems associated with increased land use and fragmentation will combine with global warming to further degrade natural flood-absorbing capacities of floodplains and wetlands, and shrink the number and type of refugia available to aquatic organisms. Forest distribution will likely change, and the hotter drier climate will be ideal for the start and spread of wildfires. Forest bird diversity will likely decrease since breeding seasons of resident songbirds might extend decreasing availability to migratory birds more attuned to day-length than temperature.

**Environmental Justice Considerations.** Climate change has disproportionate impacts on the poor, as those with the least resources have



the least capacity to adapt<sup>9</sup>. It is the poor in our own region (one in every ten Ohioans lives in poverty<sup>10</sup>) and globally that will often suffer the greatest exposure to heat impacts because of their higher sensitivity and lower resistance, resilience and coping ability. With rise in ocean levels, island and coastal communities and cultures could disappear. The predicted increases in disease and respiratory ailments threaten the poor who already lack sufficient health care.

## II. Values of the Faith Community

The Ohio Interfaith Climate and Energy Campaign is concerned about the consumptive use of energy and other resources that affect the health of our environment, and the people of our region, state, nation and world. Environmental justice, advocated by both religious institutions and government, demands that all have access to clean air, soil and water, the beauty of nature and the mechanisms of environmental decision-making. We are concerned about our social sin as Ohioans - of our carbon dioxide emissions and its impacts on our urban poor locally and the disadvantaged globally.

As human pressure on the environment has reached unprecedented levels, religious people have become increasingly reflective and vocal regarding religious environmental principles. Ohio is pluralistic religiously, being home to people from all of the major world religions, as well as the local traditions of the indigenous tribes of this region. While not univocal, religious traditions share common con-

victions regarding the place and role of human beings on the Earth, and our responsibilities for the Earth and to one another. These principles are shared by multiple religious traditions:

- Reverence for the Earth—The Earth does not belong to us, but is a creation or manifestation of the divine. We are called to live with respect, care, awe, and wonder in relationship to a universe we did not create and of which we are part.
- Interconnectedness—Our life is integrally tied up with the Earth and its creatures which we share in common and with whom we are inextricably linked. Our human well-being depends on the well-being of the Earth. We are, individually and collectively, responsible for the ecological impacts of our consumption, locally and globally.
- Stewardship, Caretaking, Guardianship—Humans have often understood themselves as having a special role on the Earth and a right to use the resources. However, abuse of the Earth is clearly forbidden. Rather, our role is described by metaphors such as steward, caretaker, and guardian.
- Concern for all of Humankind, especially the disadvantaged and future generations—Our responsibilities to one another and to the protection and preservation of all human life is emphatic and consistent in our faith traditions. We are called to be a blessing to the families of the Earth, to do justice and love mercy, to do to others as we would have them do to us, and/or to love one

another. We are, individually and collectively, responsible to the entire human family, particularly the least among us and future generations who will bear the cost of our excess.

- Virtues for Action—As followers of our faith traditions, humility, simplicity, use of goods in moderation, sacrifice and prophetic courage guide our decision-making and our actions.

## III. Addressing Climate Change in Ohio

Ohio is a major emitter of global warming gases and thus has a moral responsibility to address the challenge. As a whole, the US represents just 4 percent of the world's population, yet is consuming energy over five-fold that rate. US emissions of global warming gases (predominantly as carbon dioxide from fossil fuels) constitute 25 percent of the world's total. Ohio itself (holding 4 percent of the US population) contributes 1 percent of the world's carbon emissions, ranking third among the states (behind California and Texas) in total volume of emissions and second per capita<sup>11</sup>. The major sources of greenhouse gases in Ohio are utilities (35 percent), heating/manufacturing (24 percent), transportation (21 percent), black carbon/diesel (11 percent), agriculture (4 percent), and waste/wastewater (3 percent)<sup>12,13</sup>. Ohio is ranked sixth in the nation in energy consumption, being the third largest consumer of coal and fourth largest consumer of electricity in the USA. The emissions from fossil fuel burning contribute to Ohio's status as a top polluter in the US, and the impacts extend to neighboring States and Canada.



Alternative energy solutions for confronting climate change in Ohio must be addressed within the context of our current energy use pattern and the societal challenges.

**Farming.** Ohio is a major farming state (agriculture provides jobs for one in seven Ohioans and contributes \$79 billion annually to Ohio's economy) with significant exports<sup>14</sup>. Ohio is among the top states nationwide in winter wheat, soybean and oats production and is a top producer of eggs, cheese and livestock, so impacts of global warming on agricultural production and the potential of farmland are important considerations.

**Coal-fired power plants.** Coal-burning power plants are Ohio's largest single source of greenhouse emissions. Coal-fired power plants supply 90 percent of Ohio's energy<sup>15</sup> and coal's contribution to our economy is \$6 billion annually<sup>16</sup>. Ohio ranks 7th in coal reserves with 23.7 billion short tons<sup>17</sup>, and removal degrades natural ecosystems that are already threatened. Ohio power plants rank first for soot and acid-rain causing sulfur dioxide and smog-causing nitrogen oxide and second in mercury<sup>18</sup>.

**Transportation.** Emissions from cars and trucks are Ohio's second largest source of climate gases, with individual automobile use being a major contributor<sup>19</sup>. Although we have the fifth largest traffic volume among the states, and more than 30 counties exceed current Federal Clean Air limits for ozone and particulate matter, we are the largest population in the nation without rapid transit between our cities<sup>20</sup>. Transportation needs are increasing with urban sprawl, as land development in Ohio (predominantly

through loss of farmland) is second in the nation behind Texas<sup>21</sup>.

**Renewable energy.** Ohio lags far behind the national average of 10 percent of electricity coming from renewable sources, getting only 1 percent from homegrown renewable energy sources<sup>22</sup>. Renewable sources include wind, landfill, methane, low-impact hydroelectric, biomass, and solar electric.

## V. Toward a Sustainable Energy Future

An energy policy for Ohio must address the triple concerns of economic security, environmental protection and poverty alleviation. We must take action now to address climate warming or we will put our climate and future generations at risk. Energy demands will challenge us into the future as supplies of fossil fuels (coal, oil, natural gas) dwindle and their procurement will necessitate further disruption of natural ecosystems. To address the potential impacts of climate change and our energy challenges requires a sustainable energy future characterized by decreased reliance on fossil fuels, use of renewable energy and energy efficiency. We must maximize technological innovation and job growth, minimize impacts on the environment, and decrease the economic gap between rich and poor. Investing in energy efficient products, power plant technologies and sustainable farming practices will bolster our floundering economy and conserve energy for future generations. Ohio's legacy in technology and industry can continue through lead-

ership in finding innovative solutions that both address climate impacts and our energy challenges.

We recommend a two-fold strategy of reducing heat-trapping emissions and protecting Ohio's ecosystems through the following means:

- Transportation choices that reduce carbon emission and improve air quality are important solutions. We must increase vehicle fuel economy through efficiency, development of hybrids and use of bio-fuels, and the necessary infra-structure of transfer stations for alternative fuels must be implemented. The development of fuel-efficient vehicles such as hybrid-electrics, alternative fuels which are less polluting (biodiesel, natural gas, propane, and renewable ethanol produced from crops), provide economic incentives. Strategies for using less fuel or reducing pollutant such as anti-idling systems, diesel retrofits, and fuel economy are important steps to addressing climate change. Ohio enjoys the second largest auto-manufacturing industry among the states, positioning us as a leader in this area<sup>23</sup>. Investment in mass transit that reduces the need for individual automobiles between and within our cities will also reduce emissions.
- We must decrease our dependence on traditional coal-fired power plants while exploring the use of biofuels in existing plants and switching to more renewable energy sources. It is necessary to phase out old coal-burning power plants and to ensure the application of modern pollutant controls. Regulatory loopholes that allow older plants to con-



tinue high emissions must be closed. Integrated gasification combined cycle (IGCC) that would allow carbon capture from the gasifier and deep underground storage holds promise for reducing carbon emissions from power plants.

- A Renewable Portfolio Standard would jump start the development of renewable energy generation facilities by creating an instant demand for the power, and thus permits developers to secure project financing and bring needed investment in new technologies into Ohio. Wind turbines on Ohio farms is just one example of a potential renewable technology solution. Diversifying our energy sources would stimulate economic growth and provided energy security that would protect the environment and people.
- Sustainable agriculture and forestry practices can be applied to reduce atmospheric carbon and provide other benefits. ‘No till’ farming allows soils to retain more carbon than in conventional tillage and also improves water quality. Selective cutting and practices allowing newer forests to mature before cutting will keep carbon out of the atmosphere.
- Reducing urban sprawl will help to cut fossil fuel use and transportation costs, lower stress on agricultural land and protect the role of natural ecosystems. Ensuring the preservation of natural ecosystems will ensure maintenance of the free services they provide, including mitigation against the impacts of global climate change

Together, these steps will help to stabilize our climate, conserve land resources and help ensure more equity for people in our state, nation and world today and for future generations.

## Now choose life, that you and your descendents may live

Deuteronomy 30:19

### V. Our Pledge

*By our personal choices, institutional witness, By ur education in sound science, Ohio’s environment and energy issues and the teachings of our faith traditions on earth care, consumption and concern for the disadvantaged and future generations. And through our advocacy of just and sustainable energy policies*

**We pledge to courageously act** to confront the impacts of global warming

**We will continue to educate** our lay and ordained faith leaders on the scientific, scriptural, ethical and theological foundations of a response to global warming. Education based on sound science and practical solutions will allow congregations to be informed and active.

**We will advocate for sustainable energy policies** and related issues through media events, sign-on letters, and a national e-advocacy network that brings the religious moral voice to public debate.



**We will advocate for the most vulnerable**, calling attention to the unjust impacts of our energy consumption choices on the poor and disadvantaged and future generations.

**We will witness by our individual, congregational and institutional lives** through our personal choices and the modeling of energy efficiency and resource conservation in our facilities.

In working toward a sustainable energy future we, as people of faith, will collaborate with other religious and environmental organizations to learn together and join our voices in harmony to proclaim justice for all and preserve the earth's resources for future generations.

## References

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<sup>7</sup> Air Quality In: Ohio Environmental-Conservation Briefing Book 2005—2006. Ohio Environmental Council and Ohio League of Conservation Voters. [http://www.theoec.org/pdfs/hottopics\\_events\\_ld2005book.pdf](http://www.theoec.org/pdfs/hottopics_events_ld2005book.pdf)

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<sup>9</sup> IPCC Third Assessment Report—Climate Change 2001. Intergovernmental Panel on Climate Change (IPCC) I (<http://www.ipcc.ch/>)

<sup>10</sup> Ohio Department of Development <http://www.odod.state.oh.us>

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<sup>12</sup> US EPA State Greenhouse Inventory Tool. In: Kurt Waltzer. Ohio Climate Road Map, Part 1. (Table 1) Ohio Environmental Council. June 2005 [http://www.theoec.org/pdfs/pressrelease/hottopics\\_pr\\_climate.pdf](http://www.theoec.org/pdfs/pressrelease/hottopics_pr_climate.pdf)

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<sup>14</sup> Ohio Department of Agriculture. <http://www.ohioaginfo.com/>

<sup>15</sup> State Energy Use In: Change In: Ohio Environmental-Conservation Briefing Book 2005 – 2006. Ohio Environmental Council and Ohio League of Conservation Voters. [http://www.theoec.org/pdfs/hottopics\\_events\\_ld2005book.pdf](http://www.theoec.org/pdfs/hottopics_events_ld2005book.pdf)

<sup>16</sup> Ohio Coal Association <http://www.ohiocoal.com/>

<sup>17</sup> Ohio Coal Association <http://www.ohiocoal.com/>

<sup>18</sup> United States Environmental Protection Agency USEPA <http://www.epa.gov>

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<sup>20</sup> US Dept of Transportation Federal Highway Administration. Highway System Information System. <http://www.hsisinfo.org>

<sup>21</sup> National Resource Inventory <http://www.nrcs.usda.gov/technical/NRI/>

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