

Preface

Just over a year ago, my family was required to evacuate our home because the Upper Iowa River was threatening to breach the dikes that protect our community in northeastern Iowa. The eight inches of rain that had fallen the day before were racing through our steep watershed. As a result, the river rose rapidly and ultimately crested at a point five *feet* above the previous record flood stage and just below the top of the dikes. The earlier record had been set in 1993, the year our family moved to Decorah from New York City. Thus, within the span of fifteen years, our community experienced two “500-year” flood events.

Our Changing Global Climate

A recent report issued by the U.S. Global Change Research Program provides evidence that the deluges our community has experienced have become more frequent over the past forty years and will become more severe over the course of the twenty-first century.¹ The intensity

of heavy downpours is related to an increase of water vapor in the atmosphere, which is just one example of the impact of global warming on the United States. Other examples include fewer frost days, reduced snow cover, retreating glaciers, and less sea ice.

This governmental report, which was produced by a team of expert scientists and reviewed by a blue-ribbon panel, notes that some of the changes that have taken place in the United States have occurred sooner than previous assessments had predicted. The scientists project these changes will soon be joined by more intense hurricanes, reduced precipitation in the Southwest, and rising sea levels along the Atlantic and Gulf coasts.² These changes will pose serious challenges for agriculture and ecosystems due to rapidly changing growing seasons and the impact of heat stress on plants and animals. Reduced snowpack and rising sea levels will also threaten freshwater supplies. Other threats to human health will be posed by an increase in disease, reduced air quality, and the increased likelihood of severe weather events.³

Over the past three decades, the average winter temperature in the Midwest and northern Great Plains has increased more than 7°F.⁴ Nationally, the average temperature has increased more than 2°F. The U.S. Global Change Research Program projects an additional increase during this century of approximately 7°F to 11°F under a scenario of higher greenhouse gas emissions or approximately 4°F to 6.5°F under a lower-emissions scenario.⁵ The authors of the report depict the implications of these temperature increases in many ways. It was sobering for me to view their projections for the climate of Illinois, the state of my birth, which borders Iowa, where my family now lives. By the middle of the century, Illinois will likely experience a climate similar to what the residents of northern Louisiana experience today; by the end of the century, Illinois could experience a climate more like present-day southeastern Texas.

As the twentieth century marked a period of rapid technological change, it is becoming all too clear that the twenty-first century will mark a period of rapid ecological change. This change will pose unprecedented challenges for human communities and the ecological systems that sustain them.

I recently had the privilege to attend a consultation on climate change convened by the Lutheran World Federation. All of the participants spoke to some extent about the impact of climate change on the places where they live. Rev. Tore Johnsen, chair of the Sámi

Church Council in Norway, spoke eloquently about the challenges facing indigenous communities living in the Arctic regions. The polar areas of the planet have experienced the most rapid rate of warming and are already reeling from the consequences. Johnsen described the impact climate change is having on the Sámi people in the Arctic Circle and lamented that global warming might destroy cultures that have lived sustainably in this region for millennia.⁶ These cultures are dependent on key species in these Arctic ecosystems. The report of the U.S. Global Change Research Program projects that two-thirds of the world's polar bears will have disappeared by the middle of this century and that there will be no wild polar bears in Alaska in seventy-five years.⁷

Other colleagues at the consultation focused on the impact of climate change on various nations in Asia, Africa, Latin America, and Europe. A biblical scholar from Zimbabwe emphasized that extended periods of drought were amplifying the suffering of people in her much-beleaguered nation. A colleague from Brazil spoke about the changing climate of the Amazon and its impact on human and other natural communities in this vital region of the world. An ethicist from India emphasized that global warming will produce a huge wave of climate refugees displaced by rising sea levels.

An important theme emerged from these conversations: All over the world, those who are the most affected and least able to adapt to global climate change are also those who have least contributed to the problem. To date, the vast majority of global greenhouse gas emissions have been produced by the few who are rich, rather than by the many who are poor. Thus, the costs associated with mitigating greenhouse gas emissions and adapting to global climate change raise important ethical questions about *climate justice*. There are *intergenerational* dimensions that involve our ethical obligations to future generations. There are also *intragenerational* dimensions that demand an equitable distribution of the burdens associated with mitigation of greenhouse gas emissions and adaptation to global climate change.

Book Outline and Audience

This book grapples with various issues related to climate justice. It begins in the introduction by confronting the challenges posed by

the industrialized world's addiction to fossil fuels. The combustion of coal, oil, and natural gas is the main cause of global warming. In addition, the exploitation, protection, and distribution of fossil fuel energy supplies pose a host of other social, political, economic, and environmental problems.

The first chapter identifies various resources that can empower an ethical response to climate justice issues. I commend and utilize the ethic of ecological justice that emerged from discussions in the World Council of Churches during the 1970s and was developed further in various social policy statements of the Presbyterian Church, (U.S.A.) and the Evangelical Lutheran Church in America from the 1980s through today. I trace the biblical and theological foundations for this ethic and its related moral norms of sustainability, sufficiency, participation, and solidarity. I also identify guidelines that can be used to amplify the ethic of ecological justice as it is applied to evaluate energy options and climate policy proposals.

The next two chapters utilize these ethical resources to ethically assess conventional energy options (coal, oil, natural gas, and nuclear power) in the United States as well as alternative energy options (energy efficiency and a variety of renewables). I give attention to the public policies that have encouraged a dependence on fossil fuels and nuclear power and identify policies that will be vital to a sustainable energy future. There is no question that this will be a long and daunting process, but there is also no question that global climate change cannot be held to an ecologically sustainable level unless new energy options emerge to power economies around the world.

I then use the ethic of ecological justice and a list of guidelines I have developed to ethically assess current climate policy proposals in the international community and the United States. This has been a challenging task, since both are moving targets. When this book went to press, the U.S. House of Representatives had just narrowly passed the landmark American Clean Energy and Security Act of 2009, which utilizes a cap-and-trade system to reduce U.S. greenhouse gas emissions 83 percent from 2005 levels by 2050. By the time this book is published the fate of a similar bill in the Senate will presumably be known, and thus whether Congress will have been able to pass landmark climate legislation. On the international front, nations were still establishing their negotiating positions in advance

of the United Nations Climate Change Conference in Copenhagen in December 2009. While the details in these complicated national debates and international negotiations are constantly changing, I have tried to focus on the major ethical questions related to these proposals that will likely endure for years to come.

The book closes on a more personal and practical note as I discuss the work my college is doing to reduce its greenhouse gas emissions. As a charter signatory of the American College and University Presidents' Climate Commitment, Luther College has pledged to make sustainability a part of every student's learning experience and also to achieve "climate neutrality" as soon as possible. I discuss the barriers and opportunities associated with achieving our interim goal of cutting our carbon footprint in half, ideally by the time the college celebrates its sesquicentennial in 2011.

This book is written primarily for a U.S. audience, but I hope it will prove useful to readers in other settings. I focus on the United States because historically it is the largest emitter of greenhouse gases and also because I am a U.S. citizen. The rest of the world is waiting for the United States to assume responsibility and take leadership with regard to climate justice. This work is a contribution toward that end.

My aim is to be helpful to a wide circle of readers. I hope the book will be useful to scholars within the fields of Christian ethics and public policy, but I also have written the book in a way that I hope makes it accessible to students in classrooms, other adult learners in a variety of settings, and also to activists. The ethic of ecological justice that I utilize throughout this project provides a common moral vocabulary for discussions about the ethical aspects of climate change in various venues of civil discourse. One does not have to be a Christian to embrace the moral norms of sustainability, sufficiency, participation, and solidarity. While any discussion of energy or climate policy raises a host of social, political, economic, and environmental concerns, the reality is that these discussions always involve ethical questions about how to balance competing goods and minimize related harms. I believe the ethic of ecological justice and its associated moral norms are valuable ethical resources that can be employed productively with integrity by many.

Companion Website

Finally, I am very pleased that Fortress Press has created a website for this book (www.fortresspress.com/martinschramm). Students and instructors will find additional resources to help in their study of the ethical and environmental issues raised in this book. A study guide will help students in their review of the material in the text. A research guide will assist students in their further study, providing them with guidelines on how to write a research paper and how to find more information on energy options and climate policy proposals, including links to key sources on the web. Instructors will also find additional resources to help with their teaching of this text in their courses, including teaching notes, exam questions, and links for additional web resources.

Ethical Foundations

In my view, ethics is inherently an interdisciplinary enterprise. As a result, most of my dialogue partners in this project have been energy experts, policy analysts, and representatives of various nongovernmental organizations. As a white, male, middle-class citizen of the United States, however, I have tried to locate and integrate analyses of energy and climate issues that are written by or focus on the welfare of the poor and disadvantaged. Like Jesus, Christians must stand with “the least of these” (Matthew 25:40) and advocate for the poor and oppressed in present and future generations, who are often the victims of environmental injustice and who are least able to adapt to the global warming that is disproportionately affecting them.

My Lutheran heritage undoubtedly shapes my analysis and recommendations in this volume. Like any religious tradition, Lutheranism is a broad movement that has been expressed in many different ways in various parts of the world for centuries. Some expressions have contributed to social and political disaster, especially in Germany during the Nazi era and in South Africa under apartheid. Perhaps it is because I spent most of my youth growing up in both of these nations that I have tried to recover Lutheran traditions that contribute to the common good. I want to comment briefly here on two aspects that I think shape my views.

The first is Martin Luther's claim that God is very much at work in the world outside of the church. While there is much that is problematic about Luther's doctrine of the two kingdoms and what Lutherans later termed the "orders of creation," I think Luther's insight about God's work in the world is critical. As one surveys the advance of freedom, equality, and justice over the span of the past five hundred years, there is no question that many of these efforts were advanced and achieved by leaders who often had no association with Christian traditions, and often were opposed by representatives of them. Though Dietrich Bonhoeffer's radical christocentrism is decidedly unfashionable in our postmodern era, I resonate with his view that this cosmic Christ is the source of all that is good, true, and beautiful. It is precisely this conviction that led Bonhoeffer to work with a wide variety of people in the conspiracy who sought only one goal: the restoration of democracy and the rule of law in Germany. I see God at work in all of those people around the world who are working tirelessly to address the dangers posed by global climate change while also addressing the needs of so many who remain poor.

The second aspect of the Lutheran tradition that shapes my thinking in this volume is Luther's theological anthropology, which is most often summed up in the Latin phrase *simul iustus et peccator* (simultaneously saint and sinner). Luther believed human beings are, on the one hand, saints justified by faith before God and, on the other hand, sinners who remain in bondage to the devil. This view leads to the rejection of overly optimistic and pessimistic views of human nature. Human beings are capable of much good, but also much evil. This view produces a more realistic assessment of human potential. A realistic perspective is vital when it comes to grappling with energy options and climate policy proposals. Massive investments in fossil fuel and nuclear power infrastructure will not be abandoned overnight. Nations will not accept obligations to reduce greenhouse gas emissions if they do not perceive those reductions to be in their interests. We must not let the perfect become the enemy of the good. There is only so much that can be done at any one time. I realize that this incremental and gradualist approach can be abused, and that it has been used to suppress the revolutionary and egalitarian aspirations of the abolition, suffrage, and gay rights movements. Nevertheless, I think a realistic perspective is vital to reflection about energy

and climate policy. It is not possible to turn things around on a dime. It took centuries for industrialized nations to put the world into this climate predicament, and it will take at least decades to hold the rate of global warming to a point that might prevent ecological collapse.

For us to do this, however, bold and dramatic action is needed today. I believe realistic reflection on the current state of climate science leads to this radical conclusion. Realism and bold, decisive action are not mutually exclusive.

Notes and Acknowledgments

The impetus for this book came from courses I have been teaching at Luther College. I have been team-teaching an interdisciplinary course titled “Stewardship and Sustainable Development” for more than a decade. For the past seven years, the course has focused on U.S. energy policy. Over these years, I have had the good fortune of working with excellent students and colleagues who have taught me much and have pushed me to expand my understanding. I can’t imagine a better setting for an ethicist than a liberal-arts college. I have taught with sociologists, economic historians, chemists, physicists, biologists, and experts in international business during my time at Luther. It is precisely because ethics is an interdisciplinary exercise that it is so helpful to have students majoring in diverse fields in the classroom. I only hope they have learned as much from me as I have learned from them.

The modicum of expertise I developed in this course led to a wonderful opportunity in the fall of 2007. The Advisory Committee on Social Witness Policy (ACSWP) of the Presbyterian Church (U.S.A.) invited me to serve as the lead writer on a revision of an existing energy policy statement that had been developed in the early 1980s. Prompted by two recent wars in the Middle East and the new findings of climate scientists, leaders of the denomination decided they needed to update their energy policy statement within the context of global warming. I worked closely with the committee that fall and developed a study document and various recommendations, which were ultimately adopted by the 218th General Assembly of the Presbyterian Church (U.S.A.) in June 2008 under the title *The Power to Change: U.S. Energy Policy and Global Warming*.⁸ Much of this work served

as the foundation for the following introduction and the chapters on energy options. I am grateful to ACSWP for its permission to use this work in this volume.

I have presented portions of the research for this book in various venues over the past two years. These include presentations about energy options for the Theological Educators for Presbyterian Social Witness at a meeting in Richmond, Virginia, and also for participants in a workshop that I taught with Larry Rasmussen and Melanie Harris at Ghost Ranch in New Mexico. I have given formal papers on this topic at the annual meetings of the American Academy of Religion and the Society of Christian Ethics, as well as the Paideia Texts and Issues Lecture Series at Luther College. I have had the opportunity to give presentations about climate policy issues at consultations sponsored by the Evangelical Lutheran Church in America and the Lutheran World Federation. On all of these occasions, I have benefited enormously from the feedback I received. Ethics is most productive when it is conducted by a community of moral deliberation.

Earlier drafts and portions of the chapters in this book have been published in print or online in various journals and publications. I am grateful to Fred Gaiser, Kaari Reiersen, Karen Bloomquist, and Susan Perry for their permission to use these materials in this volume.⁹ Like all writers, I am indebted to these editors for their keen insights and editorial suggestions. This is especially true with regard to my editors at Fortress Press, Michael West, Ross Miller, and Marissa Wold Bauck.

I also want to thank several people who have shaped and encouraged my work on this project. It would be hard to find a more enthusiastic and tireless advocate for justice issues than Chris Iosso, Coordinator of the Advisory Committee on Social Witness Policy of the Presbyterian Church (U.S.A.). I thoroughly enjoyed working with Chris and his colleague, Belinda Curry, as well as Gloria Albrecht and other members of ACSWP. To my knowledge, the PCUSA is the only denomination in the United States that has produced a social statement on energy policy. I also thank Ron Duty and Karen Bloomquist for including me in consultations related to climate change convened by the Evangelical Lutheran Church in America and the Lutheran World Federation. I learned so much from my colleagues at these gatherings. One of these dialogue partners was Barbara Rossing, a good friend who provided very helpful responses to drafts of each chapter.

I want to thank several members of Luther College's faculty who gave me feedback or sent me information on various aspects of this project: Eric Baack, Jon Jensen, Kirk Larsen, Craig Mosher, Todd Pedlar, Uwe Rudolf, Peter Scholl, Tim Schweitzer, Tex Sordahl, and John Tjostem. I have also been fortunate to work with many excellent students, staff, regents, consultants, and other friends of the college on Luther's energy and greenhouse gas reduction efforts. Thanks to Luther's President, Rick Torgerson, and also to Peg Armstrong-Gustafson, Bill Craft, Larry Grimstad, Rob Larson, Caleb Mattison, Paul Roeder, Megan Selvig, Arne Sorenson, Diane Tacke, Rich Tenneson, Jay Uthoff, Todd Velnosky, and Tom Wind. It is a privilege to work with so many talented and supportive colleagues.

I have received substantial institutional support from Luther College to work on this project. I was granted a yearlong sabbatical during the 2007–2008 academic year and was recently appointed the first research chair in Luther's new Center for Ethics and Public Life. This three-year position permits me to devote half of my professional time to teaching and the other half to research. The center has enabled me to work closely with a student research assistant this past year. I express my sincere thanks to Brandon Reed for his excellent work researching various aspects of climate policy proposals, and also for his work on the index for this volume. Smart, dedicated, and mature students like Brandon are a sure source of hope for the future.

When immersing oneself in the sobering realities of climate change, it is important to have people who keep you grounded and help keep things in perspective. My wife, Karen, has been an endless source of support and encouragement. Our sons, Joel and Joshua, have also been very supportive and provide one of my primary motivations for addressing the topic of climate justice. Their generation and those that follow face a rate of warming that will be unprecedented in human history. My brothers-in-law, Mark and Mike Schramm, have a sense of humor that keeps me from getting too morose about the future as they make this world a better place as conscientious contractors. The same goes for my friends Tim Peter and Brad Miller. Tim needles me playfully about my preoccupations with global warming and campus sustainability, and Brad has patiently endured too many bike rides where I have bent his ear talking endlessly about the prospect of Luther College acquiring a wind turbine.

This book is dedicated to my teachers in Christian ethics over the years. Bob Stivers first introduced me to the field when I was an undergraduate at Pacific Lutheran University in Tacoma. I thought I was going to study business as my brothers did, but Bob got his mitts on me, and I got hooked on the humanities in general, and ethics in particular. Over the years, it has been a joy to shift from being a student of Bob's to being a colleague. James Burtness was one of my professors at Luther Northwestern Theological Seminary. I was immediately attracted to the precision of his thinking and the passion behind his ethical reflection. I was honored to be one of his research assistants and expanded my knowledge of Dietrich Bonhoeffer through this work and in his courses. Finally, I was truly blessed to work with Beverly Harrison and Larry Rasmussen at Union Theological Seminary. Both of them helped me navigate my doctoral studies in the most expeditious and productive ways. My work with Bev led to opportunities I could never have imagined in the field of ethics and population policy. My work with Larry has led to lots of work in the field of environmental ethics and a much deeper interest in the work of Dietrich Bonhoeffer. I doubt anyone else had a better doctoral advisor. These four teachers have profoundly shaped my life both inside and outside of the classroom over the course of my academic career. I dedicate this work to them in gratitude and out of a sense of responsibility to them.

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