

A PATHWAY TO PRESERVATION?
PLANNING PROCESSES AT THE INTERSECTION OF CLIMATE CHANGE AND
AFFORDABLE HOUSING IN PHILADELPHIA, PENNSYLVANIA

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ABSTRACT

Cities across the United States have been actively planning for climate change for 20 years, but equity considerations, such as climate investments' impact on disadvantaged communities, have often been overlooked or ignored in the broader climate planning process. Most recently, scholars studying climate planning and its effects have identified the following questions for areas of future research: What policies have local municipal agencies developed that specifically benefit disadvantaged communities? Under what conditions do they develop and implement these proposals?

The Philadelphia Energy Authority's Philadelphia Energy Campaign (PEC) is an unlikely success story of a municipal climate initiative prioritizing the needs of its marginalized residents by preserving affordable housing through energy policy. Under what conditions did the Philadelphia Energy Campaign become an affordable housing initiative? What are the implications for other municipalities who wish to create programming at the nexus of equity and environment? Applying John Kingdon's multiple streams theory highlights that while the PEC is novel, it is not the result of unprecedented strategies. Rather, the multiple streams analysis elucidates the power of capitalizing on traditional community development tools, such as stakeholder engagement and identifying the appropriate champion to lead the effort, suggesting that the silos separating energy and housing are not impermeable.

While this research has important implications for practitioners and academics alike, other questions about the future of the Campaign remain unanswered, including, but not limited to: Will the results of the Campaign reflect its commitment to equity? Will there be unintended consequences from the Campaign's investments?

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INTRODUCTION

Cities across the United States have been actively planning for climate change for twenty years, but equity considerations, such as climate investment's impact on disadvantaged communities, have often been overlooked or ignored in the broader climate planning process.¹ Most recently, scholars studying climate planning and its effects have noted the importance of researching case studies that prioritize the interests of marginalized groups and have identified the following questions for future research: What policies have local municipal agencies developed that specifically benefit disadvantaged communities? Under what conditions do they develop and implement these proposals?²

The Philadelphia Energy Campaign was selected as a case study to research these questions after filtering the 25 largest metropolitan areas for cities with sustainability and climate action plans that addressed housing and energy concerns in tandem. Philadelphia and the PEC were ultimately selected from three finalists (San Francisco, New York, and Philadelphia) because of its city-state relationship. Whereas San Francisco and New York have strong state support, the City of Philadelphia leads the program entirely from the municipal level. Utilizing existing literature, findings from key-informant interviews, and analysis of existing planning documents, this thesis answers the following questions: Under what conditions did the Philadelphia Energy Campaign become an affordable housing initiative? What are the implications of its creation for other municipalities?

¹ Over 1200 cities, towns, and counties are currently members of the International Council for Local Environmental Initiatives (ICLEI) – Local Governments for Sustainability. ICLEI supports these governments to measure their carbon emissions, plan to mitigate and adapt, and record process.

Melissa Checker, "Wiped Out by the 'Greenwave': Environmental Gentrification and the Paradoxical Politics of Urban Sustainability"

² Shi et al., "Roadmap towards Justice in Urban Climate Adaptation Research."

The Philadelphia Energy Authority's (PEA) Philadelphia Energy Campaign (PEC) is an unlikely success story of a municipal climate initiative prioritizing the needs of its low-income and minority residents, transcending the disconnect between equity and environment by addressing affordable, safe housing through energy policy. The PEA was created in 2010 and launched the Campaign, its primary focus, in 2016 with the arrival of current executive director Emily Schapira.³ While City Council originally created the PEA to reduce energy use and increase local energy generation, the Energy Authority now finds itself in an unusual and surprising position: at the head of one of Philadelphia's leading efforts to preserve existing affordable housing. Schapira's strong personal mission to alleviate poverty through energy policy and programming heavily influenced the creation of the Campaign, as did a variety of other factors such as how excess energy consumption was perceived as a problem and the political landscape in Philadelphia.

Situated in a state that lacks robust climate mitigation and affordable housing strategies, Philadelphia's municipal-led PEC provides a model for other progressive cities interested in pursuing similar objectives without the support of their state government. By applying Kingdon's multiple streams theory to the creation of the PEC, it becomes clear that the silos separating climate and equity in the planning processes can be overcome with basic planning tools such as stakeholder engagement and identifying an advocate to champion the initiative. Additionally, it responds to a broader academic conversation on the integration of equity and climate change, countering the argument that climate mitigation initiatives neglect their associated equity implications and that equity advancements are secondary in initiatives that claim to benefit all or satisfy multiple objectives.

³ Philadelphia Energy Authority, "About PEA."

METHODOLOGY

This research combines existing literature, findings from 20 semi-structured interviews conducted in Philadelphia in January and February of 2018, and analysis of existing planning documents from the City of Philadelphia.⁴ Interviewees represented a diverse array of perspectives within housing and energy in Philadelphia, both affiliated and unaffiliated with the Campaign. The individuals were initially identified through PEA materials and related news coverage, and later through snowball sampling. I asked interviewees similar open-ended questions about the creation of the Campaign, its explicit focus on equity, and the relationships amongst various partners and related groups.⁵ Questions ranged from, “How were coalitions built prior to the announcement of the PEC?” to “Do you believe all partners share a common vision of success for the PEC?” A complete list of interview questions is located in Appendix 2.

With NVivo software, I took an inductive “open coding” approach to analyzing the interview transcripts and notes, reading them and noting down common themes and concepts that interviewees themselves used.⁶ In repeated readings, I used a more deductive approach, grouping specific quotes under these initial categories and then connecting them with the existing literature and theoretical framework. Finally, I conducted a basic statistical analysis to measure the frequency with which key themes and words were mentioned during the interviews. In addition to key informant interviews, I conducted plan analysis to situate the Campaign within a broader Philadelphia planning context. Using a similar analytical approach, I reviewed the

⁴ See Appendix 1 for a list of organizations that participated in interviews.

⁵ See Appendix 2 for a list of questions asked in the semi-structured interviews.

⁶ Michael Quinn Patton, *Qualitative Research and Evaluation Methods*.

following plans: Philadelphia 2035: Citywide Vision, Greenworks Sustainability Plan 2009 – 2015, Greenworks Sustainability Plan 2016, and Municipal Energy Master Plan.⁷

Literature Review

A review of the existing literature in the fields of environmental gentrification and public policymaking was completed prior to beginning case study research. Environmental gentrification literature was studied to gain a better understanding of the relationship between equity and environment, and it highlighted the surprising and unusual nature of the PEC, prompting an examination of public policymaking literature to understand how and why it was created.

Environmental Gentrification

Environmental gentrification is defined as the displacement of low-income and marginalized residents that results from the implementation of sustainability initiatives.⁸ Scholars studying environmental gentrification argue that climate planning views itself as a politically neutral approach to solving environmental problems. Environmental gentrification scholars posit that no environmental intervention is politically neutral, and they critique sustainability initiatives' promise to deliver economic, environmental, and social benefits for all. Instead, they argue that economic interests dominate and threaten to “subsume planning decisions into market-based greenwashing” that exclude the interests of low-income and marginalized populations.⁹

⁷ City of Philadelphia, “Philadelphia 2035: Citywide Vision”; City of Philadelphia Office of Sustainability, “Greenworks Sustainability Plan 2009 - 2015”; City of Philadelphia Office of Sustainability, “Greenworks: A Vision for a Sustainable Philadelphia”; City of Philadelphia, “Municipal Energy Master Plan for the Built Environment.”

⁸ Melissa Checker, “Wiped Out by the ‘Greenwave’: Environmental Gentrification and the Paradoxical Politics of Urban Sustainability”; Hamil Pearsall and Isabelle Anguelovski, “Contesting and Resisting Environmental Gentrification: Responses to New Paradoxes and Challenges for Urban Environmental Justice.”

⁹ Hamil Pearsall and Isabelle Anguelovski, “Contesting and Resisting Environmental Gentrification: Responses to New Paradoxes and Challenges for Urban Environmental Justice.”

Over the past decade, research has delved into the displacement effects and broader repercussions of carbon emission and energy taxes¹⁰, brownfield removal¹¹, green space creation¹², park restoration projects¹³, bike lane infrastructure¹⁴, smart growth development¹⁵, eco-districts¹⁶, and healthy food stores¹⁷. Many of these studies have found that “green” initiatives “reinforce existing power relations and deliver little to the marginalized and vulnerable populations who would benefit the most from a sustainable future – and who have long fought for increased access to environmental goods and services.”¹⁸ There has been little attention, however, on climate planning efforts that have explicitly addressed equity concerns. In an article surveying the existing work on the topic, “Roadmap towards justice in urban climate adaptation research,” Linda Shi and others identify theoretical and empirical research needs moving forward. Their roadmap concludes with a series of research questions, including: “What policies have local municipal agencies developed that specifically benefit disadvantaged communities, and under what conditions do they develop and implement these proposals?”¹⁹ This research begins to answer the questions posed by Shi by examining the creation of the Philadelphia Energy Campaign.

¹⁰ Milena Buchs, Nicholas Bardsley, and Sebastian Duwe, “Who Bears the Brunt? Distributional Effects of Climate Change Mitigation Policies.”

¹¹ Adam Eckerd, “Cleaning Up Without Clearing Out? A Spatial Assessment of Environmental Gentrification”; H. Spencer Banzhaf and Eleanor McCormick, “Moving Beyond Cleanup: Identifying the Crucibles of Environmental Gentrification.”

¹² Hamil Pearsall and Isabelle Anguelovski, “Contesting and Resisting Environmental Gentrification: Responses to New Paradoxes and Challenges for Urban Environmental Justice.”

¹³ Vigdor, “Does Environmental Remediation Benefit the Poor?”

¹⁴ Melissa Checker, “Wiped Out by the ‘Greenwave’: Environmental Gentrification and the Paradoxical Politics of Urban Sustainability.”

¹⁵ Sarah Dooling, “Ecological Gentrification: A Research Agenda Exploring Justice in the City.”

¹⁶ Joan Fitzgerald and Jennifer Lenhart, “Eco-Districts: Can They Accelerate Urban Climate Planning?”

¹⁷ Melissa Checker, “Wiped Out by the ‘Greenwave’: Environmental Gentrification and the Paradoxical Politics of Urban Sustainability.”

¹⁸ Hamil Pearsall and Isabelle Anguelovski, “Contesting and Resisting Environmental Gentrification: Responses to New Paradoxes and Challenges for Urban Environmental Justice.”

¹⁹ Linda Shi et al., “Roadmap towards Justice in Urban Climate Adaptation Research.”

Public Policymaking Theory

There is a robust literature on how policy change happens and how policy is created, including several global theories such as punctuated equilibrium theory, policy windows theory, advocacy coalition theory, power elites theory, and regime theory. In different ways, these theories have attempted to “untangle beliefs and assumptions about the inner workings of the policy making process and identify causal connections supported by research to explain how and why a change may or may not occur.”²⁰ Given its comprehensive understanding of the various forces that lead to policy creation, John Kingdon’s multiple streams, or “policy window” theory best captured the ongoing dynamics in Philadelphia. Kingdon identifies three streams of the policy making process: problem, policy, and politics, and argues that policy change occurs during a “window of opportunity” when advocates can connect two or more streams of the policy process.²¹ The problem stream is how social conditions have become defined as “a problem” to policy makers, including “the problem’s attributes, status, degree of social consciousness of the issue, and whether the problem is perceived as solvable with clear alternatives.”²² A second stream, policies, represents the policy “solutions” that have been generated to address the problems, and the final stream in Kingdon’s theory is politics. Political factors, such as public opinion, interest from community organizations and other advocates, and elected official turnover comprise the politics stream.²³

Within this framework and its streams are several underlying assumptions, most important of which are that the way the problem is defined is critical to whether a problem is placed on the agenda and that “problem definition has a value or emotional component; values

²⁰ Sarah Stachowiak, “Pathways to Change: 10 Theories to Inform Advocacy and Policy Change Efforts,” 1–2.

²¹ John Kingdon, *Agendas, Alternatives, and Public Policies*.

²² Sarah Stachowiak, “Pathways to Change: 10 Theories to Inform Advocacy and Policy Change Efforts,” 7.

²³ John Kingdon, *Agendas, Alternatives, and Public Policies*.

and beliefs guide decisions about which conditions are perceived as problems.”²⁴ The policy window framework also underscores the importance of a strong “policy entrepreneur” or “policy advocate,” who can act when the window is open. They can couple policy streams, recognize open windows, and take advantage of opportunities, but in order to do so they must “possess knowledge, time, relationships, and good reputations.”²⁵ Kingdon’s theory has been cited over 20,000 times and has been used to explain policy change in a wide array of fields.²⁶

Case Study Selection

The paradigmatic case study of the Philadelphia Energy Campaign in Philadelphia, PA began after filtering the 25 largest metropolitan areas for cities that had published sustainability and climate action plans and developed programs to address housing and energy concerns simultaneously. Three cities, San Francisco, New York, and Philadelphia fit these criteria. Ultimately, Philadelphia, specifically the PEC, was chosen as the case study because of its city-state relationship and its position as a Democratic, “blue” stronghold within a “purple” state. While San Francisco and New York City have two dynamic programs at the intersection of housing and energy, they are both heavily supported through state funding and strong Democratic leadership. Pennsylvania is led by Governor Tom Wolfe (D), but large Republican majorities control the State House (120 – 83) and State Senate (34 – 16).²⁷ Philadelphia, therefore, is in a different situation from San Francisco and New York, and their city-state relationship is important when considering this work’s generalizability to other city governments. With 36 current Republican governors who may be less willing to fund climate

²⁴ Sarah Stachowiak, “Pathways to Change: 10 Theories to Inform Advocacy and Policy Change Efforts,” 7.

²⁵ Sarah Stachowiak, 7.

²⁶ A Google Scholar search result indicated that Kingdon’s seminal book *Agendas, Alternatives, and Public Policies* was cited 20,116 times.

²⁷ State of Pennsylvania, “Pennsylvania House of Representatives”; State of Pennsylvania, “Pennsylvania State Senate.”

related investments, programs that are driven by municipal governments are important examples to promote.²⁸

An analysis of Philadelphia's demographics and housing stock showcase the PEC's prioritization of marginalized populations: preserving existing affordable housing is a critical and intractable issue facing low-income Philadelphians. With a poverty rate of 25.7%, the highest of the ten largest American cities, preserving affordable housing and reducing utility bills is of great import.²⁹ Furthermore, 53.4% of Philadelphia's renters are cost burdened and 31% of Philadelphia's renters are severely cost burdened, respectively dedicating over 30% and 50% of their income to rent.³⁰ Low-income renters are more likely to find themselves in older, more affordable units considered naturally occurring affordable housing (NOAH), an important component every city's affordable housing strategy. Nationally, only 25% of those who qualify for a housing subsidy receive it, leaving the remaining 75% to procure housing on the private market.³¹

In Philadelphia, older housing is abundant but presents serious issues for low-income households. The city is known for its iconic rowhouses that comprise 70% of all housing units.³² Historical assets yet maintenance burdens, 75% of Philadelphia's rowhouses are older than 50 years old, leading to a variety of structural issues associated with age and deferred maintenance, such as leaking roofs and cracking walls, which bring cold drafts in the winter, hot air in the summer, and high utility bills throughout the year.³³ According to the American Housing Survey,

²⁸ National Governors Association, "Current Governors."

²⁹ Larry Eichel, "Philadelphia's Poor: Who They Are, Where They Live, and How That Has Changed."

³⁰ Melissa Romero, "53 Percent of Philly Renters Are Cost-Burdened, Says New Report."

³¹ Joint Center for Housing Studies of Harvard University, "The State of the Nation's Housing."

³² "The Housing Challenge."

³³ "Understanding the Need."

Philadelphians experience higher rates of leaks, cracks in the floors and walls, and inadequate heating than the national average, as seen in Figure 1.

Figure 1: Housing Problems, Philadelphia vs. United States³⁴

	Philadelphia	United States
Leaks	35%	14%
Cracks in floors and walls	13%	11%
Inadequate heating	11%	7%

These efficiency deficits are reflected in regional energy insecurity data on Mid-Atlantic urban households. 40% of families living below the poverty line reported facing energy insecurity, meaning they have “received a utility shut-off notice for failure to pay bills, foregone some basic necessity like food or medicine in order to pay utility bills, or opted to keep their home at an unhealthy temperature in order to reduce energy bills.”³⁵

For low-income homeowners, maintenance challenges accompany these outsized utility bills. 38% of Philadelphia’s homeowners earn less than \$35,000 a year, 42% of whom are generational homeowners that inherited the property (and likely deferred maintenance) from a family member.³⁶ Half of these repairs can be made for less than \$10,000 but are still financially out of reach.³⁷ Those who apply for assistance from the City have historically been rejected due to low credit scores or placed on a 3 – 5 year waiting list.³⁸ Deferred maintenance issues

³⁴ U.S. Census Bureau 2013 American Housing Survey; “Housing Problems – All Occupied Units (National, Philadelphia, PA),” generated by Caroline Lauer; https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=AHS_2013_C05AO&prodType=table (2 May 2018).

³⁵ Alon Abramson, “Residential Energy Consumption Survey: Implications for Philadelphia.”

³⁶ “Understanding the Need.”

³⁷ “Understanding the Need.”

³⁸ 62% of Philadelphia home repair loan applications were rejected from 2012 – 2014. The rejection rate of 62% is substantially higher than the national rate of 37% for that time period, and it is mostly attributable to low credit

continue to compound when property owners are unable to finance rehabilitating the property, posing a threat to healthy, safe housing and possibly forcing a homeowner to abandon the property. Given the attachment of one rowhouse to another, one structurally unsound unit poses a threat to the other households attached to it. The substandard housing conditions present in Philadelphia were made visible by a PEA-sponsored photo essay documenting home repair and affordability issues facing Philadelphians; a selection of photos are included in Figure 2. PEA hired local photographer Jordan Baumgarten to capture the images to “inform dignified, helpful policy and program ideas to improve the quality of life for all Philadelphians,” and designed the PEC to respond to the challenges depicted and create programming to address them.³⁹ The following photos depict energy efficiency and healthy housing concerns, such as windows covered in plastic, abundant mold, and crumbling ceilings, and they generate an intense, emotional response from the viewer.

scores. Half of Philadelphians have credit scores below 660. For more information, please see “Understanding the Need.”

³⁹ Philadelphia Energy Authority, “Residential.”

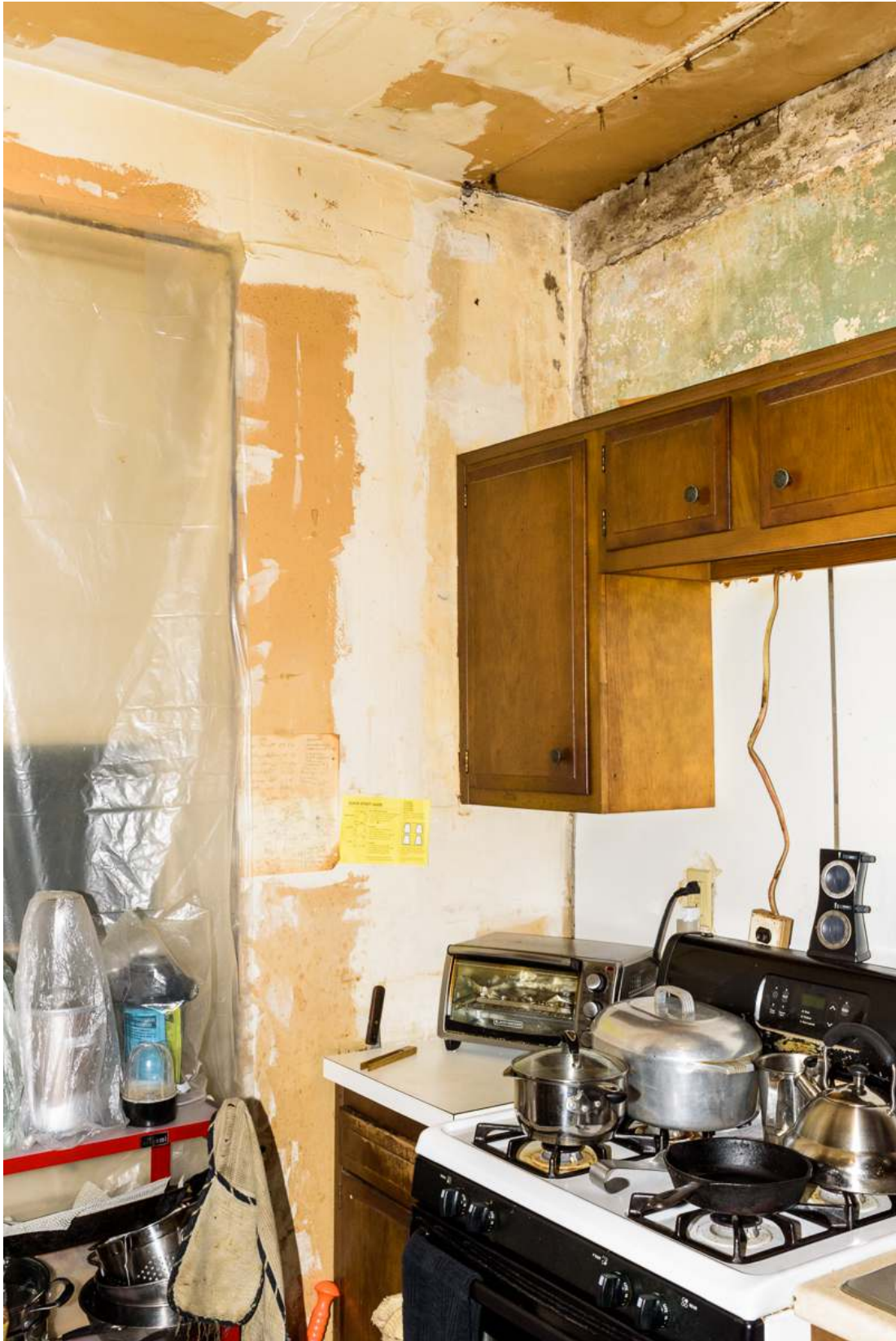
Figure 2: Philadelphia Energy Campaign Photo Essay⁴⁰





⁴⁰ All photos in Figure 2 credited to Jordan Baumgarten and printed with permission of Philadelphia Energy Authority





THE ORIGIN OF THE PHILADELPHIA ENERGY AUTHORITY AND PHILADELPHIA ENERGY CAMPAIGN

City Council President Darrell Clarke and then-Mayor Michael Nutter created the PEA in 2010 under the authority of the Pennsylvania State Legislature 2001 “Municipalities Authorities Act” as an independent municipal authority.⁴¹ Bill No. 100163-AA, a City of Philadelphia Ordinance, established the PEA to develop and facilitate energy generation and energy efficiency projects, purchase energy on behalf of the City of Philadelphia, and educate consumers on available choices in the marketplace.⁴²

While the PEA had the authority to work on a wide variety of projects, they initially faltered. Staffed with only one, halftime employee with limited experience in the field, the PEA did not have the capacity to be effective.⁴³ Schapira arrived in 2016, the same year the PEA launched the PEC. While the typical focal point of an energy initiative is the fastest or most efficient way to reduce energy consumption, the focus of the PEC is the residents who will benefit the most from energy reduction today. The driving purpose is made obvious in the opening paragraphs of the document that announced the Campaign:

The Campaign is focused on equity and Philadelphia communities. It is an energy campaign for our citizens and their homes and their neighborhoods, not for the big office buildings of Center City. The local rec center, the branch library, the police station, the firehouse, the corner food store and the local restaurant – all will be recruited to receive energy retrofits. The Campaign will show that energy conservation and clean renewable energy benefit everyone. Fairness demands the benefits be equitably distributed to all citizens.⁴⁴

⁴¹ City of Philadelphia, Bill No. 100163-AA.

⁴² City of Philadelphia.

⁴³ Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer via phone, March 12, 2018.

⁴⁴ Philadelphia Energy Authority, “The Philadelphia Energy Campaign: A Ten Year, Neighborhood Driven Program,” 2.

By inextricably linking equity and energy, the PEC prioritizes the needs and interests of low-income and minority residents, giving it a substantially different focal point than most energy initiatives. With this as its framework, the Campaign plans to create jobs, strengthen communities, cut energy bills, and reduce Philadelphia’s carbon footprint by leveraging \$1 billion of public and private investment over ten years.⁴⁵

Figure 3: Goals and Metrics of the Philadelphia Energy Campaign⁴⁶

Campaign Goal	Corresponding Metric
Create jobs	- 10,000 livable wage jobs over 10 years for low-income and minority Philadelphians
Strengthen communities	- Retrofit 25,000 low-income homes and apartments - Retrofit 2,500 neighborhood small businesses
Cut energy bills	- Reach estimated energy savings of \$200 million/year after all projects are implemented
Reduce Philadelphia’s carbon footprint	- Reach estimated carbon emissions savings of 790,000 MT of CO ₂ e/year after all projects are implemented

Over half of the funding (\$550 million) of the Campaign is dedicated to working on residential buildings, with the remainder dedicated to the municipal, K-12 schools, and small business building sectors.⁴⁷ The residential portion of the Campaign encompasses a broad swath of housing typologies, including multi-family buildings, small apartment buildings, and single-family houses, and it brings together many different owners, such as the Philadelphia Housing Authority (PHA), private landlords, multi-family affordable housing developers, and individual

⁴⁵ Philadelphia Energy Authority, 2.

⁴⁶ Philadelphia Energy Authority, 2–5.

⁴⁷ This thesis focuses on the residential portion of the Campaign because it represents the largest portion of the Campaign and has received the most attention thus far. Additionally, it represents the most tangible example of a climate mitigation project (energy efficiency retrofits) that is focused on the needs of marginalized populations (low-income homeowners and renters).

homeowners. The energy reduction opportunity in residential buildings matches the intensity of the Campaign's focus on it, as residential buildings will be responsible for 29% of all U.S. energy use by 2020, and buildings built before 1980 (typically NOAHs) account for 70% of all U.S. greenhouse gas emissions⁴⁸ Retrofitting older residential buildings creates a clear opportunity to both positively impact low-income Philadelphians and reduce emissions.

While the opportunity is clear, the Campaign's focus on affordable housing is surprising. PEA has an institutional focus on energy, and environmental gentrification scholars argue that climate planning efforts are devoid of equity considerations. Furthermore, Philadelphia, has not incorporated equity concerns, such as housing preservation, into their Greenworks municipal sustainability plan. Throughout the City's most recent planning documents, Philadelphia has acknowledged the lack of success in advancing equity through sustainability initiatives and has called for the creation of an Equity Index to enhance accountability. In early 2017, the City of Philadelphia's Office of Sustainability made the following announcement on their website:

Philadelphia has made great progress toward becoming a more sustainable city, but that progress has not happened in the same pace in every neighborhood. To ensure Philadelphians in every zip code enjoy the benefits of sustainability, the City of Philadelphia will launch the Greenworks Equity Index in Spring 2017. The index will use data to identify areas where Philadelphians aren't benefitting from sustainability. City agencies, non-profit organizations, and community members will design specific projects in those areas to improve outcomes. Partners will then expand successful projects to bring improvement to other communities. Check back soon for updates on the progress of this new program.⁴⁹

Unfortunately, the Index was not released in the spring of 2017, and the page was last updated eight months ago in September of 2017. Philadelphia planning documents repeatedly mention the Equity Index, and it was mentioned in every interview with a City of Philadelphia official.

⁴⁸ "Quadrennial Energy Review."

⁴⁹ City of Philadelphia Office of Sustainability, "Greenworks Equity Index."

This suggests that it is a key initiative, yet there is no public evidence of progress and it is behind schedule. The Office of Sustainability, has however, praised the initial work of the Campaign in interviews conducted with Christine Knapp, the Director of the Office of Sustainability, as well as with Adam Agalloco, the Energy Manager within the City.⁵⁰

Given these challenges, the successful creation of the PEC provides an important case study for understanding how a program at the intersection of equity and environment came into existence. Multiple streams theory provides a fruitful framework to better understand the planning processes that were the genesis of the PEC.

APPLYING KINGDON'S MULTIPLE STREAMS FRAMEWORK

The Problem Stream

“We are not doing energy for energy’s sake. It’s energy as a vehicle for addressing our city’s biggest challenges, whether that is climate change or poverty or public health.”⁵¹

Alon Abramson, Program Manager at Philadelphia Energy Authority

According to Kingdon, the problem stream is how social conditions come to be defined as a problem to policy makers, including the problem’s attributes, status, and perception.⁵² The Energy Authority’s ability to frame the intersection of existing, deteriorating affordable housing and energy efficiency as an urgent problem that can provide a vehicle to achieve a diverse set of interests was key to driving forward the PEC’s creation. PEA staff reiterated the importance of connecting the PEC to other issues facing Philadelphia in interviews. “Energy as a vehicle is our tagline,” said Alon Abramson, program manager at PEA, and using the energy platform to

⁵⁰ Christine Knapp (Director of Philadelphia Office of Sustainability), interviewed by Caroline Lauer via e-mail, January 25, 2018.

Adam Agalloco (City of Philadelphia Energy Manager), interviewed by Caroline Lauer, Philadelphia City Hall, January 18, 2018.

⁵¹ Alon Abramson (Program Manager at Philadelphia Energy Authority), interviewed by Caroline Lauer at Philadelphia City Hall, January 12, 2018.

⁵² Sarah Stachowiak, “Pathways to Change: 10 Theories to Inform Advocacy and Policy Change Efforts,” 7.

advance other initiatives has been key for building initial support for the PEC.⁵³ Schapira also spoke to the importance of framing the issue:

We've found that Philadelphia is really siloed. There's energy people. There's housing people. There's community development people. There's health people. They're totally separate. If you don't speak their language, they don't want to talk to you... Being able to talk about it in a context that is of value to them is really helpful.⁵⁴

Through this framing, PEA connected the intersection of energy and housing to opportunities to create jobs, improve health outcomes, stabilize changing neighborhoods, build future economic markets for large companies, and reduce Philadelphia's environmental impact, winning support from a diverse group of partners, including the Philadelphia Housing Authority, CMC Energy Services (an energy services contractor), Rebuilding Together Philadelphia (a home repair and rehabilitation nonprofit), and the Reinvestment Fund Philadelphia (a social impact investor specializing in energy efficiency and renewable energy investments).

While providing multiple access points for partners to engage with the problem may be seen as diluting the problem or migrating away from an emphasis on equity, the PEA embedded the problem in a broader equity mission by connecting it to Philadelphia's high poverty rate, which also lent a sense of intensity. Poverty is a pressing issue, said Shapira:

Culturally in Philadelphia, poverty is what matters. It is not sustainable for us to continue to think that we could grow as a city without everybody catching up. I think fundamentally the mayor will echo that – all council members will echo that no matter what their party. We all know that is the number one priority in Philadelphia today.⁵⁵

⁵³ Alon Abramson (Program Manager at Philadelphia Energy Authority), interviewed by Caroline Lauer at Philadelphia City Hall, January 12, 2018.

⁵⁴ Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer at Philadelphia City Hall, January 12, 2018.

⁵⁵ Ibid.

“What works politically is that the City of Philadelphia is very poor,” said Robinson, the former director of the Energy Coordinating Agency (ECA) in Philadelphia, and PEA used the definition process to connect their work to a diverse set of issues rooted in the city’s poverty rate.⁵⁶

Additionally, PEA communicated the problem extremely well. With tools like the photo essay and by avoiding overly technical language, PEA articulated the problem in a manner that resonated with others. For Schapira, this is something she prides herself on:

I think in general people want to help [me]. I think I am good at framing the issue in a way that it makes sense for people to engage on it and look at people’s incentives and ask how we make this align for everybody’s needs.⁵⁷

Schapira and PEA’s success with framing the problem garnered support from two critical constituencies with two different objectives: 1) political actors, such as City Council members and the Mayor and 2) government agencies and community-based non-profits, both of which are reflected in Kingdon’s politics stream.

The Politics Stream

“The whole public coalition was rooted on the strength of the Council President, and having him as a champion changed everything.”⁵⁸

Emily Schapira, Executive Director of Philadelphia Energy Authority

“I don’t know if there is a special sauce other than the personalities. [Schapira] had long term relationships with a lot of key players, in the nonprofit world, city world, and so on. Emily is the special sauce.”⁵⁹

Roger Clarke, Director of the Clean Energy Program at the Reinvestment Fund, Former Consultant to Philadelphia Energy Authority

⁵⁶ Liz Robinson (former Executive Director of Energy Coordinating Agency), interviewed by Caroline Lauer via phone, February 7, 2018.

⁵⁷ Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer via phone, March 12, 2018.

⁵⁸ Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer at Philadelphia City Hall, January 12, 2018.

⁵⁹ Roger Clarke (Director of the Clean Energy Program at the Reinvestment Fund, former consultant to Philadelphia Energy Authority), interviewed by Caroline Lauer via phone, February 27, 2018.

Building political support from politicians and community-based organizations with a diverse set of interests was critical to the creation of the Philadelphia Energy Campaign. Council President Darrell Clarke, who was the primary political supporter of the Campaign, is arguably one of the two most powerful people in Philadelphia, sharing power with the mayor. While Philadelphia's government is built around the concept of a "strong mayor," their role is secondary in cases of "councilmanic prerogative," or legislative courtesy.⁶⁰ Based on the principle that no one knows a district better than the representative, councilmanic prerogative gives the council member the ability to "stop or alter projects that are not good fits for neighborhoods, make quality developments even better, and secure funding for neighborhood organizations or initiatives."⁶¹ While councilmanic prerogative applies to all Council members, the Council President also has "extensive powers to shape and direct the work of Council" and his support has been critical to the launch of the Campaign.⁶² Schapira recalled the importance of Clarke's support in an interview:

Honestly, we get all of our political power from the Council President... The whole public coalition was rooted on the strength of the Council President, and having him as a champion changed everything. That was the thing that made all the difference. Had we just tried to launch on our own, I don't think [the coalition] would have valued it. I think because people view it as [Clarke's] marquee initiative... and people want to please him. He lends a lot of legitimacy to what we are doing. He really built those coalitions.⁶³

PEA connected the problem to Council President Clarke's job creation goals to build political support. Robinson remembered the creation of the PEC as such:

The PEA went to Council President Clarke and said the best thing you can do for jobs in the City, if you really want to create jobs, is save energy on a massive

⁶⁰ "Philadelphia's Councilmanic Prerogative: How It Works and Why It Matters."

⁶¹ "Philadelphia's Councilmanic Prerogative: How It Works and Why It Matters," 1.

⁶² "How City Council Works," 8.

⁶³ Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer at Philadelphia City Hall, January 12, 2018.

scale...Clarke basically said to the PEA – prove it to me. Show me how many jobs I can create. Show me how you’re going to do it. That was the genesis.⁶⁴

This also facilitated greater understanding amongst all the Council members because Clarke was invested in garnering their support. “We went from having one City Council member who really got sustainability to the majority of them really understanding it. They are totally supportive and very willing to move forward...they get it,” said Robinson.⁶⁵

While the Council President’s conception of the problem was oriented towards job creation, the other entities involved with the PEC had their own unique conceptions of the problem. 80% of interviews mentioned the intensity of the problem and the need for more money, people, and resources to be working on the issue. While partners were motivated by the “problem,” the conception of need differed amongst them. Five nuanced types of need, all rooted in the larger issue of poverty and community wealth gaps in Philadelphia, emerged during the interviews.

⁶⁴ Liz Robinson (former Executive Director of Energy Coordinating Agency), interviewed by Caroline Lauer via phone, February 7, 2018.

⁶⁵ Ibid.

Figure 4: “Need” as Motivator and its Differentiations

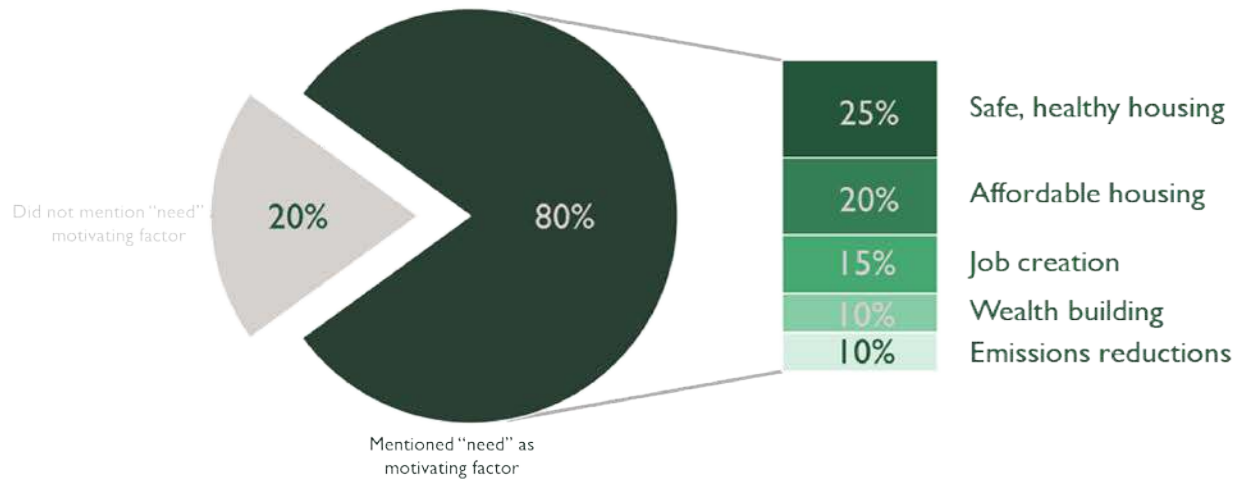


Figure 5: Access Points to “Problem”

	Number of Interviewees
Mentioned “need” as motivation	16
<i>Providing safe, healthy housing through home repair</i>	5
<i>Preserving affordable housing</i>	4
<i>Creating jobs</i>	3
<i>Increasing home equity and building wealth</i>	2
<i>Reducing energy consumption and carbon emissions</i>	2
Did not mention “need” as motivation	4
Total Interviews	20

Some respondents were focused on how an inefficient building limited their owners’ potential for wealth building, while others were dedicated to expanding access to safe and healthy housing through basic systems repair or training local community members and funneling them into high paying jobs in the energy efficiency industry. Campaign partners coalesced around its core tenets: alleviating poverty through energy efficiency investments, even if their motivations were fewer asthma-induced emergency room visits, lower utility bills, less

burdensome home maintenance, or a better emergency safety net via increased home equity. PEA understood the political landscape and intentionally defined a space for themselves that built on ongoing efforts and responded to existing concerns. “They were offering to fill a niche that needed to be filled,” emphasized McConnell, policy director at Philadelphia Association of Community Development Corporations (PACDC), “They understood the field and the different players, and they understood the demands and challenges and made sure not to overlap but to really add value and not step on toes.”⁶⁶

While collaboration between groups with different yet related objectives could have created problems, Philadelphia’s energy and housing nonprofits were willing to overcome them due to a shared organizing history against utility shutoffs for low-income Philadelphians and longstanding personal relationships. In the early 1980s, a shift in policy and personnel at Philadelphia Gas Works (PGW), the largest municipally owned gas utility, led to a spike in the number of utility cutoffs for residents struggling to pay their utility bills.⁶⁷ Shutoffs escalated from 3,000 people to 30,000 people annually, causing a “crisis of the entire neighborhood in low-income communities in Philadelphia,” Robinson recalled.⁶⁸ “We started organizing, and the utility really didn’t want to hear it,” said Robinson, “It was a very difficult period of time just trying to talk with them. They refused to talk with the advocates.”⁶⁹ A tightknit, dedicated group of activists within community development emerged from this process, and Robinson, who has worked in the field in Philadelphia for 33 years, emphasized the shared history of energy and housing advocates. “This history of this stuff goes back,” she said, “There’s a very coherent core

⁶⁶ Beth McConnell (Policy Director of Philadelphia Association of Community Development Corporations), interviewed by Caroline Lauer via phone, February 5, 2018.

⁶⁷ Herbert B. Ershkowitz, “Philadelphia Gas Works.”

⁶⁸ Liz Robinson (former Executive Director of Energy Coordinating Agency), interviewed by Caroline Lauer via phone, February 7, 2018.

⁶⁹ Ibid.

group who has been working on these issues for a long time. We've learned a lot. There's a lot of collaboration and trust."⁷⁰

Other challenges of collaboration, such as funding or "turf" concerns, has also been mitigated. Schapira and PEA eliminated the possibility of competing for nonprofit resources, a competition that was described by Abramson of PEA as "dog-eat-dog," by promising not to compete for resources. "We have had to not compete for resources," said Schapira, "That has been the number one way we have been able to get people to our side – we have had to say that we are not going to bid on the same grants that you are bidding on. We're not trying to take money out of your pockets in anyway, and we are not trying to take money away from the old way of doing things either."⁷¹ Some nonprofits involved in the Campaign, however, were still hesitant about collaborating with one another because of limitations in their funding sources that dictated terms that may clash with the Campaign and its process or deliverables. A deep trust in one another built through long-standing relationships helped to ameliorate these concerns and weather difficult points in the process. For example, there were points of miscommunication during implementation of a multifamily housing pilot that caused Tom McAteer of CMC Energy Services, an energy services contractor, "to really strain relationships with people." Fortunately, he continued, "our relationships are really, really strong with the contractors and utilities we work with – we've had some of these contracts for 20 years."⁷²

The length of personal and professional relationships continued to emerge during interviews. Of those who were interviewed, the average time working in the field was 17.4 years,

⁷⁰ Ibid.

⁷¹ Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer at Philadelphia City Hall, January 12, 2018.

⁷² Tom McAteer (Program Manager at CMC Energy Services), interviewed by Caroline Lauer in Fort Washington, PA, January 16, 2018.

and many of them knew and respected Schapira from past experiences working with her. Roger Clarke, the Director of the Clean Energy Program at the Reinvestment Fund and former consultant for PEA, attributed the strong coalition to Schapira and the relationships she brought to the table: “I don’t know if there is a special sauce other than the personalities. [Schapira] had long term relationships with a lot of key players, in the nonprofit world, city world, and so on. Emily is the special sauce.”⁷³ PACDC, who had some reservations about the Campaign but ultimately supported it, is one example of this. “I’ve known Emily for a long time,” said McConnell, “and while I was unsure about some points of the Campaign, I trusted her.”⁷⁴ Trust in one another, built from strong personal and professional relationships, brought a diverse coalition together to support the Campaign and move it forward.

Finally, the Philadelphia Energy Authority positioned itself well to capitalize on these relationships. Sitting outside of municipal government, the Philadelphia Energy *Authority* has greater flexibility to form public-private partnerships. From Schapira’s perspective, this is one of the key enabling conditions for the progress that PEA has been able to make:

I think a magical thing is we are an authority and we don’t have the chain of command. The City of Philadelphia has an Office of Sustainability, and they have an Energy Office, which is awesome and smart and great. They have been working their butts off way longer than we have to try to move this stuff forward for the City, but they have not been able to move things as quickly as we have... We don’t have someone to report to who is telling us to cool it. If we don’t have the budget for it, we can go look for money elsewhere. We can find private sector money or raise grant funds or go back to City Council and ask for more outside of the chain of command.⁷⁵

⁷³ Roger Clarke (Director of the Clean Energy Program at the Reinvestment Fund, former consultant to Philadelphia Energy Authority), interviewed by Caroline Lauer via phone, February 27, 2018.

⁷⁴ Beth McConnell (Policy Director of Philadelphia Association of Community Development Corporations), interviewed by Caroline Lauer via phone, February 5, 2018.

⁷⁵ Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer at Philadelphia City Hall, January 12, 2018.

Agalloco also stressed this strength in an interview:

[PEA] can be a little bit more nimble than City government can be in developing ideas, especially contractually. I can't go out and contract as easily as she can...I can't develop a program just by saying, "Hey, do you want to work with us? Let's work together." [PEA] can do that a little bit more freely, especially in this pilot phase. Whereas for me, it's still got to be a City contract. It's still got to be an RFP. It's got to go through all the approvals and City standard contracting language. [PEA] is a different animal and it lends itself well to relationships and partnerships.⁷⁶

As political support builds, it creates a positive feedback loop between the problem and politics streams. Broader support brings more interest groups who bring different understandings of the problem, and evolving conceptions of the problem impact the political support. Both problem and politics streams, feeding off one another, affect the policy stream.

The Policy Stream

*"I think the [PEC] is partially a good idea. It's partially that we've got people who really know the city saying this is a good idea."*⁷⁷

Adam Agalloco, City of Philadelphia Energy Manager

The policy stream is the policy that is created to address the problem stream, and in the case of the PEC, the policy stream arises from the intersection of the problem and politics streams. It illuminates possible explanations for why certain types of programming were contained in the Campaign, why some programs have received the most attention thus far, and why some initiatives are not present. Agalloco underscored the dynamic relationship between policy and politics:

I think [PEC] is partially a good idea. It's partially that we've got people who really know the city saying this is a good idea and people who know a lot of people in these spaces who support it...The Council President is obviously a very

⁷⁶ Adam Agalloco (City of Philadelphia Energy Manager), interviewed by Caroline Lauer at Philadelphia City Hall, January 18, 2018.

⁷⁷ Ibid.

influential person, and he wanted this to succeed. You've got folks like Emily – very driven, well-connected folks saying 'This is a model we think can work.'⁷⁸

Portions of the Energy Campaign that gain traction, as well as those that do not, are a result of the problem and politics streams.

Given the diverse group of partners and the broad framing of the project, the policy that emerged from both streams transcended traditional silos of housing and energy, bridging them through the projects of the Campaign. Breaking down silos and working at their intersection was necessitated by how the problem was defined and the multiple angles from which partners approached it. Additionally, this “silo-busting” approach that blended the worlds of energy and housing more fully, was attached to the possibility of economic growth and job creation to centralize political support for the Campaign.

There are currently four main programs within the PEC, including a hybrid grant-loan program to expand home repair services, a multi-family housing pilot with affordable housing developers, and an energy services contract with the Philadelphia Housing Authority, each of which connect with and are informed by the politics stream. For example, the Campaign has proposed a \$40 million sliding scale hybrid grant-loan program for homeowners who do not qualify for grant programs to expand the City Council's existing \$100 million effort to eliminate basic systems repair and weatherization waiting lists.⁷⁹ The PEC's hybrid program's design fuses Clarke's interests in reducing the waiting list and accelerating job creation with the PEC's objectives.⁸⁰ Even the forum where this idea has been developed merges with the politics stream: PEA is working with Rebuilding Together Philadelphia, Healthy Rowhouse Project, and Energy

⁷⁸ Ibid.

⁷⁹ City Council's \$100 million of funding came from a 0.1% increase to the Realty Transfer Tax and a new housing preservation bond that was introduced in November 2016.

⁸⁰ Melissa Romero, “Philly Puts \$100M toward City's Free Home Repair Assistance Program.”

Coordinating Agency through City Council's Housing Preservation committees to advance this initiative.⁸¹

The Campaign's multifamily housing project is a collaboration with Mission First Housing Group (MFHG) and Friends Rehabilitation Program (FRP), who manage 1,400 and 500 units respectively, to build robust programming for multi-family affordable housing developers.⁸² The pilot capitalizes on buildings with expiring Low-Income Housing Tax Credits that will soon be refinanced to implement building-wide energy initiatives. Working with the utilities PECO and Philadelphia Gas Works, as well as the subcontractor CMC Energy Services and energy reduction and finance startup BlocPower, the Campaign has helped implement deep energy retrofits like new heating, ventilation, and air conditioning (HVAC) systems that will bring estimated energy savings of 50% over the course of the project.⁸³ This project brings together the entities with the potential to drive growth in the energy efficiency sector and who are interested in building a more robust market for their products, an attractive possibility for the mayor and city council members given their interest in economic development.

The Philadelphia Housing Authority (PHA) energy services contract (ESCO) project works with a subset of Philadelphia's tenants: those living in publicly owned housing, and the project capitalizes on a strong pre-existing relationship with Barbara Moore, PEA board member and Sustainability Coordinator at PHA, as well as advances the politics stream's interest in economic growth. Described as "one of the most innovative energy projects attempted by any housing agency nationwide," it is a partnership between the Philadelphia Housing Authority, Johnson Controls Inc. (JCI) (an energy services company) and the Philadelphia Energy Authority

⁸¹ "Philadelphia Energy Campaign: Update and Path Forward," 17.

⁸² "Philadelphia Energy Campaign: Update and Path Forward," 18.

⁸³ "Philadelphia Energy Campaign: Update and Path Forward," 18.

to audit 20,000 public housing units for potential energy and water investments. The project emphasizes hiring local labor and working with minority and women owned businesses.⁸⁴ Even in its early stages, this project has helped yield the selection of a “diverse, local workforce in communities that previously have been excluded from this type of work” and build a market for energy efficiency now and into the future.⁸⁵

The Campaign’s existing efforts consistently underscore their dual ability to 1) train local residents for jobs in the energy efficiency industry and 2) create a market that will stimulate demand for more energy efficiency projects. Building a local energy market is critical to the Campaign’s objectives; it will create jobs and opportunities to serve more difficult parts of the market, like low to moderate income residential, and satisfy the mayor and council members’ goals to spur economic growth. Job creation has been Council President Clarke’s top priority since entering office in 1999.⁸⁶ Schapira explained the need to entice energy services businesses “to move their offices into the city and hire locally out of our training programs, as well as think about diversity in a real, true, honest way – not just in a pass-through way” in order to make strides in job creation.⁸⁷ Roger Clarke also spoke of the importance of leveraging pilot projects to build a market for future growth:

“This is a market building process. We’re not going to wake up tomorrow with all of the energy auditors and all of the energy geeks out there running around weatherizing homes. That’s not going to happen overnight. This is a building campaign that says if we express our commitment to move dollars into this sector – energy efficiency and residential buildings. What are the jobs we need? What are the skills that we need? What are the business relationships and business models that we need? That’s all pretty important. Let me stress one thing about all

⁸⁴ Philadelphia Energy Authority, “Residential.”

⁸⁵ “Philadelphia Energy Campaign: Update and Path Forward,” 16.

⁸⁶ “Council President Darrell L. Clarke: District 5.”

⁸⁷ Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer at Philadelphia City Hall, January 12, 2018.

of this – the realization that in addition to public dollars, we must also bring in serious private dollars to have our efforts at the scale they need to be.”⁸⁸

Contractors like CMC Energy Services have a stake in this process as well, who participated despite profit loss. McAteer explained the rationale for participating:

We knew going into it wasn’t something we were going to make additional money on or anything like that – that’s not what it’s about for us... For us, it comes back to the long game, which is if you want to keep delivering services and you want to deliver more and more comprehensive services, you have to think about [your future market]. You’re either going to bite the bullet now, or someone is going to take a bite out of you later to do it. It’s just painful at the beginning.⁸⁹

Both public and private entities had vested interests in creating a robust market for deep energy efficiency retrofits, and the PEC designed policy directly connected to those interests.

The projects described above reflect how the politics stream can move policy forward; however, there are also examples of how the politics stream can stymie other important efforts. Though renters on the private market, regardless of new jobs, are arguably the most vulnerable group to displacement, they have not received as much attention. The Campaign is developing a voluntary green and affordable housing pilot to redevelop vacant properties in the city to high levels of energy efficiency, but the details for how the properties’ affordability will be preserved are tenuous.⁹⁰ Redeveloping properties could have unintended consequences such as raising rental prices and displacing the low-income tenants the PEC is trying to assist. Will the tenant pay for utility savings with a higher monthly rent? Schapira admits to the Campaign’s shortcomings with renters, acknowledging that “the rental market is the hardest nut to crack. We

⁸⁸ Roger Clarke (Director of the Clean Energy Program at the Reinvestment Fund, former consultant to Philadelphia Energy Authority), interviewed by Caroline Lauer via phone, February 27, 2018.

⁸⁹ Tom McAteer (Program Manager at CMC Energy Services), interviewed by Caroline Lauer in Fort Washington, PA, January 16, 2018.

⁹⁰ Philadelphia Energy Authority, “Residential.”

know that's not the easy one and we don't have a solution yet."⁹¹ The landlord-tenant split incentive, which describes the landlord's lack of incentive to invest in energy efficiency because they are not reaping the benefits through lower utility bills, complicates the problem, but there is also an element of political feasibility. Preserving affordable rental housing requires limiting real estate profits or distributing large rental subsidies, both of which are not politically viable.

The Policy Entrepreneur

*"I knew this was a problem, and this felt like an opportunity to fix something that I've been wanting to fix for a decade."*⁹²

Emily Schapira, Executive Director of Philadelphia Energy Authority

The final component of Kingdon's framework is the policy entrepreneur, who acts when a policy window opens, taking advantage of an opportunity to influence policy outcomes and advance their interests. Schapira, who had worked at the nexus of energy and social justice for over a decade, saw a chance to build a program that could reshape Philadelphia and began creating the structure of the Campaign as a volunteer board member. "I put in a lot of work, just during my regular job," recalls Schapira, "I did a lot of nights and weekends and vacations to put together the Campaign."⁹³

Deeply motivated by past experiences, Schapira has been waiting for an opportunity to create a project like the Campaign for 15 years. As a recent college graduate, she worked for a heating oil coop in Philadelphia, and she still vividly remembers the constant stream of phone calls from people who had run out of heating oil: "All winter long my voicemail would fill up every single day and my phone would run off the hook with people who had run out of heating

⁹¹ Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer at Philadelphia City Hall, January 12, 2018.

⁹² Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer via phone, March 12, 2018.

⁹³ Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer at Philadelphia City Hall, January 12, 2018.

oil and couldn't afford to buy more."⁹⁴ Most of the people calling Schapira ran out of heating oil because of serious home disrepair, such as a "hole in their roof or a single pane, broken window."⁹⁵ The problem was severe, and the intensity of the phone calls stays with Schapira to this day. "I could hear their teeth chattering inside of their own house," she recalled.⁹⁶ Unable to offer any substantive assistance, Schapira spent her own money buying heating oil for people, eventually racking up tens of thousands of dollars of personal credit card debt. After five years with the organization, Schapira left because it became "too much emotionally" for her, but the intersection of energy efficiency and older, naturally occurring affordable housing remained on her radar.⁹⁷

In the Campaign, Schapira saw an opening to address an issue that had been haunting her for years. "I knew this was a problem, and this felt like an opportunity to fix something that I've been wanting to fix for a decade," she recounted in an interview, "[the heating oil co-op] was a long time ago but here was this chance right in my face to do something about this for people. It's something I've carried with me for a long time."⁹⁸ She knows that these are difficult and complicated issues to address, but she sees her role clearly in developing policy options:

If not us, then who? The answer is, frankly, then nobody. Either we do this or we don't, but it's never lost on us how important this is and how impactful this is to other people's lives. I think I have juice, so I like this environment. Probably if this were easier, I wouldn't like it as much.⁹⁹

⁹⁴ Ibid.

⁹⁵ Ibid.

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer via phone, March 12, 2018.

⁹⁹ Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer at Philadelphia City Hall, January 12, 2018.

In addition to her personal experiences and intrinsic motivation, Schapira is well supported by colleagues and partners associated with the Campaign. In numerous interviews with Campaign partners, their trust and respect for her was a resounding theme. 15 of 20 interviewees mentioned her enthusiasm, dedication, and knowledge as factors that motivated their participation in the Campaign. Even the Campaign's most vocal critic paused during their criticism to acknowledge Schapira's enthusiasm and say, "I dig Emily. She's infectious with her enthusiasm."¹⁰⁰

Schapira's energy extends to the ways in which she leads her staff and the tone she sets at the PEA. She prefers to think she directs the PEA more as a start-up than as government, emphasizing a different mindset and an unwillingness to become a big bureaucracy.

We are trying to stay nimble. We take on things that are hairy and complicated, and that's ok. We're not afraid to fail, which I think is really tough in city government or in any government, but I've really pushed my staff and myself to be comfortable with the idea that not everything is going to work but we have to move forward quickly. Some of the pilots we have run are not the perfect iteration of this – we're trying to go into it, learn some lessons, tweak it, and make it better. None of us are career government people. We don't want to be here for the next 30 years and get a pension. Our goal is to achieve the mission, and that's really lucky. In any government situation, especially in municipal government and in a big city like Philadelphia, there's a lot of 'This is how we've always done it. This is how things are done.' We don't accept that. We haven't been around long enough for anything to have been done any sort of way. It gives us a lot of freedom to find the right way.¹⁰¹

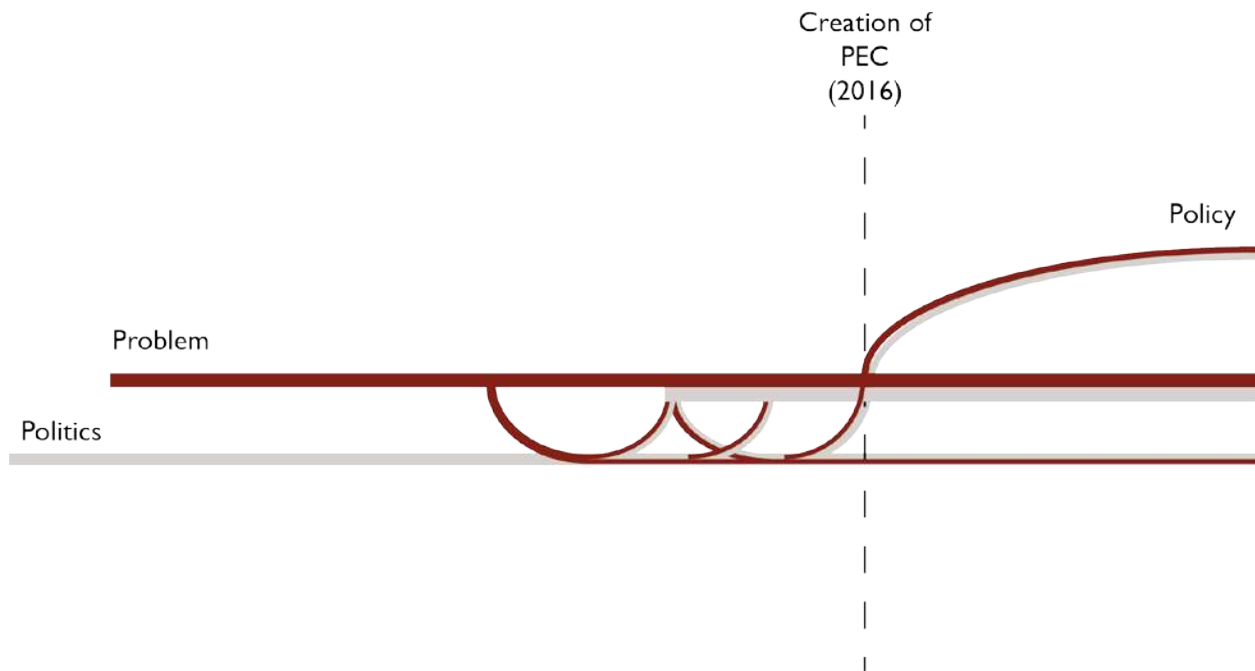
Schapira's knowledge, enthusiasm, and past experiences positioned her well to recognize the policy window and move quickly to take action.

¹⁰⁰ Phone interview by Caroline Lauer with individual who wishes to remain anonymous, February 15, 2018.

¹⁰¹ Emily Schapira (Executive Director of Philadelphia Energy Authority), interviewed by Caroline Lauer via phone, March 12, 2018.

Revisiting the Streams

Figure 6: Problem, Politics, and Policy Streams in Philadelphia Energy Campaign



Kingdon's multiple streams theory elucidates the conditions that led the PEC to focus on preserving affordable housing, and Figure 6 illustrates the three streams and how they interact with one another. The political stream provides the context in which the problem is defined. The problem stream is the most powerful stream, and the definition of the problem responds to the political landscape in order to generate a broad base of support. Problem and politics stream are in a positive feedback loop, as shown in the combination of red and grey streams. Eventually, the policy stream results from the interaction between problem and politics, responding to both streams.

DISCUSSION

Community development efforts that preserve affordable housing through energy efficiency are rare, but the PEC demonstrates that merging both objectives into one program is a

viable policy option. Furthermore, the creation of the PEC without state support indicates that the viability of such projects extends to municipalities who wish to act independently. Applying Kingdon's multiple streams theory highlights that while the PEC is extraordinary, it is not the result of unprecedented strategies. Rather, the multiple streams analysis elucidates the power of capitalizing on traditional community development tools, such as stakeholder engagement and identifying the appropriate champion to lead the effort, suggesting that the silos separating energy and housing can be overcome.

This case study underscores the importance of intentionally defining "the problem" in a manner that provides multiple access points and deliverables to encourage participation and satisfy a diverse group of interests. The definition of the problem also harnessed the visceral and emotional elements of substandard housing conditions to attract supporters. Of the three streams, the problem stream was the most influential, and the framing of the problem responded to the political situation and engaged with the motivations of those in power. It capitalized on existing momentum while also advancing new objectives, creating a positive feedback loop with the politics stream. Ultimately, the policy stream, or the creation of the Philadelphia Energy Campaign, arose from these two streams. In Philadelphia, the broad problem was poverty, though different locations will have other challenges that unify diverse stakeholders.

The champion, or "policy entrepreneur," is a critical component of moving the project forward. Their ability to navigate the political stream, connect diverse interests to "the problem" through policy design, and rely on personal and professional relationships moves initiatives forward. Schapira combines true enthusiasm and passion for the topic with the nuanced understanding of the political landscape. While her intrinsic motivation and long personal relationship with energy efficiency and housing was necessary for the PEC because of its

novelty, it is not an essential characteristic for advocates of future efforts. The power of example from the PEC can mitigate the absence of Schapira's deep connection to the problem; however, it is still critical to have a champion that brings strong relationships and a nuanced understanding of the problem and political landscapes.

The approach to public-private partnerships embodied in the policy stream informs both practice and academic debates. The promise of future economic growth in exchange for immediate benefits facilitated the implementation of pilot projects, and it developed a market that the PEA deemed essential to their long-term sustainability. Developing mechanisms for the Campaign's work to become self-sustaining was necessary for an office of five to lead a \$1 billion, and it is important yet simple tactic for other small, young organizations to emulate. Within the field of environmental gentrification, public-private partnerships are critiqued as trickle-down approaches that neglect marginalized groups in favor of economic interests. The PEC's approach to public-private partnership structure subverts the traditional model that assumes positive outcomes for all by ensuring the first set of benefits come to the more vulnerable population – low-income residents – while promising future wins to large companies who have an interest in expanding the market for their products and services. Once again, the methods to accomplish this are not novel, but rather they require intentionality to create a structure for distributing benefits.

Finally, the case study of the PEC provides a counterexample to environmental gentrification's argument that climate investments lack or subordinate equity considerations, and it begins to answer the questions posed at the beginning of this paper that are at the frontier of knowledge in the field of environmental gentrification. What policies have local municipal agencies developed that specifically benefit disadvantaged communities? Under what conditions

do they develop and implement these proposals?¹⁰² The PEC's dedication to preserving existing affordable housing while reducing energy consumption provides a case of a local municipal climate policy developed to specifically benefit disadvantaged communities. Understanding how efforts such as the PEC were created is critical for the development of more holistic and equitable climate investments in the future.

Research on the origin of the PEC delivers helpful insights for practitioners and academics, but it warrants additional research. The Campaign is structured to include equity considerations as a core tenet, but will it be successful in this regard? It's possible that despite its intentions, the PEC will lead to unintended consequences such as displacement, gentrification, or higher property values that bar low-income residents from entering the housing market. How would this change the existing network of supporters? As the PEC grows, will relationships remain strong or fracture? While the broad conception of the problem has been essential thus far, it could pose threats to the strength of relationships and the ability to communicate amongst partners in the future. Will the Campaign be able to continue if key advocates such as Clarke or Schapira were to leave? Clarke's position as an elected official is vulnerable each election season, and personal or professional reasons could take Schapira away from her work, and either's absence could derail future success. Though many questions about the future of the Campaign remain, it continues to be an excellent example for other municipalities who hope to establish similar programming.

¹⁰² Shi et al., "Roadmap towards Justice in Urban Climate Adaptation Research."

APPENDIX 1: Participating Organizations (in alphabetical order)

BlocPower
CMC Energy Services
Community Life Improvement Program
Energy Coordinating Agency
Friends Rehabilitation Program
Habitat for Humanity Philadelphia
Healthy Rowhouse Project
Mission First Housing Group
Philadelphia Association of Community Development Corporations
Philadelphia City Council
Philadelphia Corporation for Aging
Philadelphia Energy Authority
Philadelphia Energy Office
Philadelphia Gas Works
Philadelphia Housing Authority
Philadelphia Office of Sustainability
Rebuilding Together Philadelphia
Reinvestment Fund

APPENDIX 2: Interview Questions

Only a selection of the questions below were asked in the interviews, and each subset was crafted to suit the individual respondent. This list encompasses all of the questions that were formally asked at some point during an interview.

1. What is your role within the Philadelphia Energy Campaign?
2. When did your organization become involved in the Campaign?
3. When the campaign was announced, a broad array of groups came out in support of it. How were those coalitions built before the announcement to generate this support?
4. The Campaign is very explicit about its focus on social equity. In the initial report you published on the campaign, the first key priority reads as follows:

“The Campaign is focused on equity and Philadelphia communities. It is an energy campaign for our citizens and their homes and their neighborhoods, not for the big office buildings of Center City. The local rec center, the branch library, the police station, the firehouse, the corner food store and the local restaurant – all will be recruited to receive energy retrofits. The Campaign will show that energy conservation and clean renewable energy benefit everyone. Fairness demands the benefits to be equitably distributed to all citizens.”

How did such an explicit focus on equity come in to the project? Can you explain that process more for me?

5. The Campaign is very bold and ambitious, and it lists a variety of objectives and public benefits that will result from the campaign, such as job creation, job training, social equity, housing preservation, carbon reduction, public health and neighborhood stabilization. How do you balance these co-benefits?
6. Is there one objective that is the most important? If so, what is it?
7. How do you define neighborhood stabilization?
8. The second goal of the Campaign, after creating 10,000 jobs over 10 years, is “strengthen communities.” How do you define a strengthened community and what metrics will you use to measure this?
9. You spoke earlier about the coalition building done before the Campaign was launched. How would you describe those coalitions now? How do you all work together?

10. Are there any challenges to working with so many partners? What are the strengths of this approach?
11. Who provides the private financing?
 - a. Have you been successful attracting new financing, and what is your relationship like with those partners?
12. Do you all share a common vision of success for the Campaign?
13. In regards to the co-benefits discussed earlier – do you ever feel like there is competition between the various partners to advance some benefits over others?
14. The PEA has used the phrase “neighborhood driven” to describe the Campaign. How do you define “neighborhood driven”?
15. Are there specific neighborhoods that you are prioritizing (of those that are eligible – 50% of block is \leq 80% AMI), or are you working with anyone who is eligible?
16. How did PEA decide to intervene in the realm of affordable housing?
17. How do you feel about PEA’s decision to intervene in the realm of affordable housing?
18. I know the EnergyFIT program was an important precedent for the Campaign. What parts of the EnergyFIT program did the Campaign want to emulate?
19. How does the Campaign differ from the EnergyFIT program?
20. Were there any other precedents that you sought to model for your residential programs? Vice versa, were there programs that had elements you specifically wanted to avoid/reverse?
21. Was there any academic literature that you referred to during the planning process of the LMI Residential portion of the campaign?
22. What is your relationship like with other city officials, community-based organizations, or other entities involved with preserving affordable housing in Philadelphia?
23. How do you define “preserve existing affordable housing”?
24. What is your relationship like with existing low-income energy efficiency programs, such as Basic Systems Repair Program (BSRP), Weatherization Assistance Program (WAP), and Adaptive Modification Program (AMP) administered by the Philadelphia Housing Development Corporation, as well as state and utility led programs?

25. Can you tell me more about the voluntary green and affordable housing pilot?
26. What incentives is PEA developing to preserve affordability?
27. How many properties have participated thus far? Are any of the projects completed?
28. Have you encountered any obstacles thus far? If so, what were they?
29. What does success look like to you in this sector of the Campaign?
30. Are there other city officials or organization leaders that stand out that I should speak with?

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