CONNECTICUT GREEN BANK

Inclusive Prosperity and the Green Economy

Reflections on Pope Francis' Encyclical Laudato si' - On Care for Our Common Home

Bryan Garcia
President & CEO of the Connecticut Green Bank

April 22, 2018

Inclusive Prosperity and the Green Economy

"We are not faced with two separate crises, one environmental and the other social, but rather with one complex crisis which is both social and environmental. Strategies for a solution demand an integrated approach to combatting poverty, restoring dignity to the excluded, and at the same time protecting nature." [1]

Pope Francis

Clarity – Introduction to Inclusive Prosperity

Mother Jennifer of the Daughters of Mary of the Immaculate Conception presenting the Connecticut Green Bank with recognition for providing financial aid for solar power on their buildings.

It was a cold winter afternoon in New Britain, Connecticut in early January of 2018, where the purpose of green banks became ever so clear to me. The Daughters of Mary of the Immaculate Conception had just commissioned a 1.2-megawatt solar PV system financed by the Connecticut Green Bank. This project required $2.8 million of investment, will reduce the emissions of nearly 10,000 tons of greenhouse gasses over the life of the project, and save $1.3 million in avoided electricity costs over the next 20 years through a power purchase agreement. The investment for this project, a part of a larger portfolio of similar projects for underserved credits, came through an innovative financial structure that brings together a limited amount of public sector funding through the Connecticut Green Bank, with a lot more private sector funding from US Bank.

As a result of this project, the Daughters of Mary will reduce the burden of energy costs from their operating expenses, enabling them to provide more services to the community.

1 Laudato si' – On Care for Our Common Home by Pope Francis (104)

The campus of the Daughters of Mary, where the solar PV systems are located, includes a hospital that provides a variety of health care services, various residential options for senior citizens, daycare programs for the young and the elderly, and shelter and support services to victims of domestic violence. The deployment of green energy on the campus of the Daughters of Mary helps them deliver more services to a community in need. As the State of Connecticut faces budget challenges, it is investments in green energy like this, that reduce the burden of energy costs, that provide a gateway to inclusive prosperity.

A Confession and Definition of Inclusive Prosperity

As these are my own personal reflections on Pope Francis's Laudato si', I must confess. I am agnostic. In my first year on this planet, I was baptized by my parents in the Catholic faith. Growing up, they attended mass – not me. In college, I attended weekly Campus Crusades for Christ meetings with my best friend from the baseball team where I accepted Christ. I wear a gold crucifix and a medallion of St. Paul around my neck. I claim neither faith, nor disbelief in God. There, now that part of my confession is out of the way – now onto a definition.

In 2017, in preparation for the finals of the Harvard Kennedy School's Ash Center's "Innovation in American Government Awards," the Connecticut Green Bank discovered the term "inclusive prosperity" as the foundation to its winning closing remarks.[2] Inspired by Washington, DC Mayor Muriel Bowser, who is in the process of creating a green bank, she said "Every day, we are showcasing how Washington, DC's diverse and innovative community is driving our economy. I am confident that this framework will accelerate our progress as a leader for inclusive prosperity by creating opportunities that are accessible to all, supporting longtime businesses and residents, and benefitting our most disadvantaged communities." As a lifelong public servant focused on environmental protection and community economic development and having also served in the former Soviet Republic of Kazakhstan as a U.S. Peace Corps volunteer, I can understand the very principles of this term.

A fuller definition of "inclusive prosperity" is noted by Larry Summers and Ed Balls.

> *"When democratic governments and market systems cannot deliver such prosperity to their citizens, the result is political alienation, a loss of social trust, and increasing conflict across the lines of race, class, and ethnicity. Inclusive prosperity nurtures tolerance, harmony, social generosity, optimism, and international cooperation. And these are essential for democracy itself."* [3]

2 https://www.youtube.com/watch?v=yOUKTt5Jhww

3 "How to Create Inclusive Prosperity – And Save Democracy" by Larry Summers and Ed Balls in The Huffington Post.

My arrival at the nation's first green bank in the summer of 2011, was no coincidence. It took the team of the Connecticut Green Bank more than five years to discover not what we do and how we do it, but more importantly why we do it – to ensure inclusive prosperity through the green economy.

Connecticut Green Bank – Mobilizing Private Investment in Connecticut's Green Economy

In July of 2011, under the leadership of Governor Malloy with the bipartisan support of the Connecticut General Assembly, the nation's first state-level green bank was formed – the Connecticut Green Bank. A state-level innovation that evolved from a failed federal policy,[4] the Connecticut Green Bank makes green energy more accessible and affordable to families and businesses through public-private partnerships. The Connecticut Green Bank helps people thrive and businesses grow by providing them with the capital they need to finance green energy improvements on their properties.

Recently, the Connecticut Green Bank discovered its purpose – putting the power of capital markets in the hands of all consumers of the green economy, while providing them with a mechanism to make their lives (and all our lives) better. Connecticut recognized that there will never be enough public dollars to meet its aggressive energy and climate goals. The United Nations Environmental Program (UNEP) released a report[5] that said the world will need $90 trillion of public and private capital over the next 15 years to confront the worst effects of climate change. This is the equivalent investment of $800 per person per year – an inordinate (and yet a mere pittance) amount of capital to save our planet. The Paris Accords acknowledge the importance of capital in its third aim of the convention in Article 2 – making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development. Government therefore needs to "crowd in" more private investment into the green economy to mitigate emissions and adapt to the effects of global warming. The Encyclical recognizes the role capital markets play.

---

4 American Clean Energy and Security Act of 2009 proposed and passed in the 111th United States Congress (H.R. 2454) by Henry Waxman (D-CA) and Edward Markey (D-MA), but never passed in the Senate.

5 Financing Sustainable Development: Moving from Momentum to Transformation in a Time of Turmoil (September 2016).

"Enlighten those who possess power and money that they may avoid the sin of indifference, that they may love the common good, advance the weak, and care for this world in which we live. The poor and the earth are crying out" (Laudato si', 180).

The public-private investment model the Connecticut Green Bank has pioneered uses scarce public dollars to attract multiples of private investment and is creating a thriving marketplace for green energy in Connecticut. Connecticut's budget has been under pressure for years, making a grant-based model for the public sector unsustainable. So, the Connecticut Green Bank sought out and forged an innovative model with a focus on public-private partnerships to support green energy financing.

The Connecticut Green Bank focuses its limited funds on gaps in the market where the private sector has not yet offered a viable solution – especially underserved low-to-moderate income communities. In its first five years, the Connecticut Green Bank has invested $200 million of public funds to mobilize over $1.2 billion of investment into Connecticut's green energy economy.[6] This investment has reduced the burden of energy costs on nearly 27,000 families and businesses, created over 14,000 jobs in our communities, raised over $50 million in sales, individual, and corporate tax revenues for Connecticut, and is reducing over 4.0 $MMTCO_2$ greenhouse gas emissions. Green energy deployment reduces energy costs for consumers, creates opportunities for work, and is good for society and the environment.

Investment Leads to Economic Growth – Creating Meaningful Jobs in Our Communities

"Business is a noble vocation, directed to producing wealth and improving our world. It can be a fruitful source of prosperity for the areas in which it operates, especially if it sees the creation of jobs as an essential part of its service to the common good" (Laudato si', 96).

Solar photovoltaic installers and wind turbine service technicians are projected to be the first – and second – fastest growing occupations from 2016 through 2026 in the United States – +105% and +96%, respectively.[7] Alongside the growth in jobs in the green economy, there will need to be simultaneous efforts for a just transition for certain parts of the country or sectors of the market. For example, displaced coal miners in Wyoming and West Virginia – states with the largest share of these workers – will need workforce development and training. The growth of customers using Uber and Lyft, as opposed to taxi cabs, and the onset of autonomous vehicles, will require that assistance

---

6 Comprehensive Annual Financial Report of the Connecticut Green Bank for FY 2017.

7 Experts Foresee a U.S. Work Force Defined by Ever Widening Divides in the New York Times (October 25, 2017)

be provided to cab drivers and employees of automobile manufacturers. In Connecticut, as we transition to a no-to-low carbon grid that sees an increase in the deployment of renewable heating and cooling and electric vehicles using clean electricity, this will lead to the displacement of local gasoline, oil, and propane dealers, many of them family-owned businesses that have been passed on from generation to generation. They will need assistance with the transition to the green economy.

> *"Today, however, we have to realize that a true ecological approach always becomes a social approach; it must integrate questions of justice in debates on the environment, so as to hear both the cry of the earth and the cry of the poor" (Laudato si', 35).*

The environment and the economy are linked. The more we increase investment in green energy, the more efforts that will be required for a just transition for those jobs displaced by the economic dislocation from the green economy.

In comparison to the UNEP target, the Connecticut Green Bank has gone from $8 of investment per person per year through a grant-based model of our predecessor to $80 of investment per person per year through a public-private financing model – an order of magnitude improvement, however an order of magnitude still far short of the capital required to confront climate change. For every dollar the Connecticut Green Bank invests, there is now nearly 10 dollars of private investment, and because of that efficient use of public funds, we are stabilizing energy costs, reducing greenhouse gas emissions, and creating jobs Connecticut desperately needs. If worldwide income is $100 trillion and citizens worldwide are paying $30 trillion in taxes,[8] then a mere 1% of tax revenues going to green energy would yield $300 billion of annual public investment. At a 10 to 1 leverage ratio of public funds to private investment, $3 trillion a year could be invested in the green economy – half the investment the UN says is necessary.

---

8 S.E. Monsignor Marcelo Sanchez Sorondo, Chancellor of the Pontifical Academy of Sciences and Chancellor of the Pontifical Academy of Social Sciences, The Vatican

Towards Inclusive Prosperity – Green Energy Reduces the Burden of Energy Costs

As a co-chair of the Financing Solutions Working Group of the State Energy Efficiency Action Network (SEE Action Network),[9] understanding the current state of the market for low-to-moderate income households with respect to financing green energy is significantly important. The green economy must benefit all income classes. According to a SEE Action Network report, 25 percent of low-income families and 15 percent of moderate-income families live in multifamily housing – and 10 percent of low-income families and 5 percent of moderate-income families live in mobile homes.[10] In 2009, 45 percent of low-income households and 42 percent of moderate-income households lived in housing that was more than 40 years old. Older buildings are less energy efficient than newer buildings,[11] increasing the burden of energy costs on families.

In Connecticut, 85 percent of household units are more than 35 years old – and nearly 25 percent of these units were built before 1939. These buildings have numerous health and safety issues including asbestos, lead paint, mold, knob-and tube-wiring, and other issues that prevent green energy improvements. Over 50 percent of housing units are low-to-moderate income – with about 70 percent of those units being single family and 30 percent of the units being multifamily properties.[12] About two-thirds of low-income households rent their homes, with the remaining one-third owning their home. In Connecticut, these households are no longer just urban or rural, but suburban too – making it challenging to target and serve this market.

Connecticut has the highest energy costs in the country, which places an undue energy burden on families. The issue of energy and climate change is linked to income, job opportunities, health and resilience. For our most vulnerable citizens, high energy costs are forcing them to trade-off paying utilities with things like food, medicine, or housing.

> *"There can be no renewal of our relationship with nature without a renewal of humanity itself. There can be no ecology without an adequate anthropology" (Laudato si', 88).*

---

9 The State and Local Energy Efficiency Action Network (SEE Action) offers resources, discussion forums, and technical assistance to state and local decision makers as they provide low-cost, reliable energy to their communities through energy efficiency. Bruce Schlein of Citi Group is also Co-Chair of the Financing Solutions Working Group.

10 State and Local Energy Efficiency Action Network. (2017). Energy Efficiency Financing for Low-and Moderate-Income Households: Current State of the Market, Issues, and Opportunities. Prepared by Greg Leventis, Chris Kramer, and Lisa Schwartz of Lawrence Berkeley National Laboratory. (14)

11 Ibid (15).

12 Comprehensive Plan of the Connecticut Green Bank for FY 2017 and FY 2018. (53-54)

In Connecticut, a majority of households were constructed before the 1980's when key building standards (e.g., lead-based paint) were not yet put into place. While 100,000 households receive federal assistance from the Low-Income Home Energy Assistance Program (LIHEAP), the average energy burden for low income households is over 30% higher than the national average.[13]   Low income households are paying between $1,250 to $2,500 more of their household income for energy per year.

The Connecticut Green Bank impact data was also telling a striking story – that low (i.e., less than 80 percent area median income) to moderate (80-100 percent of area median income) income (LMI) households were being left behind in the green energy economy of the state – see Table 1.[14]

Table 1. Connecticut Green Bank Residential Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands in FY 2012

MSA AMI Band	% Projects	% Investment	% Deployment
<80%	4%	4%	4%
80%-100%	12%	11%	12%
>100%	83%	86%	85%
Total	**100%**	**100%**	**100%**

Of the 420 projects, $15 million in investment, and 3 MW of renewable energy deployment in residential activity in FY 2012, a majority was going to non-LMI households – in comparison, only 70 projects totaling $2 million of investment was in LMI households. We were leaving behind a segment of the population that needed our assistance to enable them to benefit from the green energy economy.

> *"The poorest areas and countries are less capable of adopting new models for reducing environmental impact because they lack the wherewithal to develop the necessary processes and to cover their costs" (Laudato si', 38).*

---

13 APRISE. Meeting the Energy Needs of Low Income Households in Connecticut: Final report. December, 2016.

14 Comprehensive Annual Financial Report of the Connecticut Green Bank for FY 2017.

The Connecticut Green Bank discovered that it is our responsibility to attract more private investment in low-to-moderate income communities to ensure "inclusive prosperity" – that is that the benefits of the green economy must be made available to everyone, including those underserved. Mayor Muriel Bowser said it best: "By creating a green bank, we will create more jobs for D.C. residents, which will allow us to continue our push for inclusive prosperity."[15]

Love Wins – Investing in Underserved Markets

> *"As I have loved you, so you must love one another."*
>
> *John 13:34-35*

The Connecticut Green Bank had to do more to bring prosperity in reach for all. Beyond increasing incentives for low income households, we conducted research that identified "Prudent Yankees" (e.g., elderly households on fixed incomes) were concerned about their energy burden, and we messaged to local contractors that credit scores (e.g., FICO) didn't correlate with income in Connecticut. We also catalyzed public-private partnerships by attracting PosiGen, a solar company from Louisiana that was already serving lower income families, to establish a Northeast presence in Bridgeport, Connecticut. The Connecticut Green Bank assembled a number of investors – tax equity and senior debt – to co-invest nearly $50 million with us in LMI-focused projects supported by PosiGen.

Connecticut Governor Dannel Malloy with PosiGen customer and now employee Susan Young.

PosiGen combines a solar PV lease with an energy efficiency Energy Savings Agreement (ESA) package that reduces the energy burden on LMI families. One of their customers, a single mother from Bridgeport, was paying over $250 a month for electricity. She was able to go solar and drop her electricity costs to under $100 a month. She was so inspired by her experience, that she now works for PosiGen, going into homes like hers, telling her story to families about their right to take control.

> *"Work is a necessity, part of the meaning of life on earth, a path to growth, human development and personal fulfillment. Helping the*

15 D.C. Mayor Proposes 'Green Bank' to Fund Emissions-Cutting in Nation's Capital in the Washington Post (March 15, 2017)

poor financially must always be a provisional solution in the face of pressing needs. The broader objective should always be to allow them a dignified life through work" (Laudato si', 95).

The Connecticut Green Bank has made "inclusive prosperity" an essential element of its model – from reducing the energy burden on families and businesses to creating jobs in our communities, we are reducing the emissions that cause global climate change by mobilizing private investment in Connecticut's economy.

More recently, we have seen an improvement in the impact data for LMI households and the green energy economy in Connecticut – see Table 2.[16]

Table 2. Connecticut Green Bank Residential Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands in FY 2017

MSA AMI Band	% Projects	% Investment	% Deployment
<80%	36%	33%	26%
80%-100%	18%	17%	19%
>100%	46%	50%	54%
Total	**100%**	**100%**	**100%**

Of the 6,550 projects (15 times more than FY 2012), $160 million in investment (10 times more than FY 2012), and 40 MW of renewable energy deployment (13 times more than FY 2012) in residential activity in FY 2017, currently an equal amount is going to LMI and non-LMI households – about 3,500 projects and over $80 million of investment specifically in LMI households.

"Love, overflowing with small gestures of mutual care, is also civic and political, and it makes itself felt in every action that seeks to build a better world (Laudato si', 167).

As we discovered with "inclusive prosperity," when we serve the underserved in our society, love wins!

16 Comprehensive Annual Financial Report of the Connecticut Green Bank for FY 2017.

Public-private partnerships have the potential to mobilize massive amounts of capital for the common good.

> *"Today, it is the case that some economic sectors exercise more power than states themselves. But economics without politics cannot be justified, since this would make it impossible to favor other ways of handling the various aspects of the present crisis. The mindset which leaves no room for sincere concern for the environment is the same mindset which lacks concern for the inclusion of the most vulnerable members of society" (Laudato si', 144).*

Private capital investment in the green economy is not only driven by the bottom-line, but also by growth in the economy, job creation, and community economic development. For example, the Community Reinvestment Act (CRA) was enacted by Congress in 1977 to encourage depository institutions to lend in low-to-moderate income communities. These banks are rated as to the volume of their lending to projects and investment in these communities by regulators.

> *"To ensure economic freedom from which all can effectively benefit, restraints occasionally have to be imposed on those possessing greater resources and financial power" (Laudato si', 96).*

Green energy projects are potentially compliant with CRA requirements if they are below 80% of Metropolitan Statistical Area's (MSA) Adjusted Median Income (AMI) level. Connecticut's Department of Banking Commissioner – Jorge Perez – suggested that the Connecticut Green Bank use CRA to attract more private investment in underserved communities. Over time, the Connecticut Green Bank has created more and more opportunities for investment that are CRA-eligible in Connecticut – see Table 3.

Table 3. Connecticut Green Bank Commercial and Residential Activity in Metropolitan Statistical Area (MSA) Area Median Income (AMI) Bands for Projects and Investments for FY 2012 through FY 2017

Fiscal Year	% Projects <80% AMI	# Projects <80% AMI	% Investment <80% AMI	$ Investment <80% AMI
2012	5%	20	3%	$522,348
2013*	7%	79	68%	$76,159,144
2014	11%	258	16%	$16,372,242
2015	14%	921	22%	$70,896,533
2016	23%	1,759	22%	$67,635,550
2017	34%	1,838	37%	$78,468,098
Total	**21%**	**4,875**	**29%**	**$310,053,915**

* The high % of investment and $ investment in 2013 in less than 80 percent AMI is the result of the 15 MW Dominion Bridgeport Fuel Cell Park investment – the largest fuel cell power plant in the U.S. on a restored brownfield, in a distressed community, using a technology manufactured in Connecticut.

Since the inception of the Connecticut Green Bank, we have increasingly supported more green energy projects and investment in underserved markets that are CRA-eligible.

Despite Recognition, Challenges at Home Threaten the Connecticut Green Bank – State Budget Hinders Innovation

In July of 2017, six years after its inception, the State of Connecticut and the Connecticut Green Bank won the coveted Harvard Kennedy School Ash Center's "Innovation in American Government Awards" for "Sparking the Green Bank Movement" and emphasizing the importance of "inclusive prosperity" within the green economy.

> *"But political and institutional frameworks do not exist simply to avoid bad practice, but also to promote best practice, to stimulate creativity in seeking new solutions and to encourage individual or group initiatives" (Laudato si', 130).*

As the "Academy Awards" of government, from more than 500 nominations in public service across the country, including police officers in Massachusetts administering Narcan to heroin overdose victims and Pre-K education offered to all children in New York City to crowdfunding economic development in cash-strapped Michigan to redistricting political districts in California, Connecticut's green bank emerged as the nation's leading innovation in 2017. The Connecticut Green Bank's example of using limited public funds to mobilize private investment in its economy by reducing the burden of energy costs on families and businesses and creating jobs through the deployment of green energy, is confronting poverty and climate change and serving as the example for the role of government for the common good.

> *"Particular appreciation is owed to those who tirelessly seek to resolve the tragic effects of environmental degradation on the lives of the world's poorest" (Laudato si', 12).*

The people of the Connecticut Green Bank are extraordinary. If ever there were a true definition of public service at work for the common good, it would be exemplified by the daily efforts of the staff, board, and supporters of the Connecticut Green Bank. As typified by Chris Magalhaes, a green banker from the Connecticut Green Bank, his sentiments demonstrate missionary beliefs of common good versus mercenary self-interest:

> *"I graduated from business school with roughly $200,000 of debt and a choice. I could manage investments in the family office of one of the world's top hedge funds or I could take a job at the Connecticut Green Bank. The difference in salary and bonus, was, to put it mildly, appreciable. I chose the Green Bank."*[17]

Despite the success of the Connecticut Green Bank, and the commitment of its people to its mission, there are currently challenges in Connecticut that threaten its very existence.

> *"Politics and economy tend to blame each other when it comes to poverty and environmental degradation. It is hoped that they can acknowledge their own mistakes and find forms of interaction directed to the common good" (Laudato si', 145).*

Connecticut state government has $74 billion in unfunded retirement obligations and bonded debt.[18] On October 31, 2017, a $41.3 billion two-year bipartisan budget was passed closing a deficit of more than $3.5 billion only to be back in the red an additional $200 million a month later. In order to reduce the deficit, the Connecticut General Assembly felt it necessary to sweep $125 million from the Conservation and

---

17 A Millennial's Math on Compensation in GreenBiz by Chris Magalhaes (June 6, 2017)

18 How Could They Be Surprised in an Editorial in the Hartford Courant (November 21, 2017)

Load Management Fund (administered by the utilities),[19] $20 million from the Regional Greenhouse Gas Initiative (administered by the Connecticut Department of Energy and Environmental Protection),[20] and $28 million from the Clean Energy Fund (administered by the Connecticut Green Bank).[21]

Although we trust that our political leaders are making decisions that are in the best interest of the State of Connecticut, it is difficult to conceive that their choices – to reduce private investment in a struggling state economy, to increase the burden of energy costs on families and businesses in the highest electricity-priced state in the country, and to reduce the progress in creating jobs in our communities resulting from green energy deployment – is anything but irrational.

> *"Believers themselves must constantly feel challenged to live in a way consonant with their faith and not to contradict it by their actions. They need to be encouraged to be ever open to God's grace and to draw constantly from their deepest convictions about love, justice, and peace" (Laudato si', 147).*

On December 15, 2017, in response to Connecticut's political leaders sweeping of funds from the Connecticut Green Bank, the Board of Directors and staff of the Connecticut Green Bank made the difficult decision to make significant changes to keep the organization on solid financial ground through fiscally rigorous actions. The sweeps have had serious negative consequences and the Connecticut Green Bank is doing all it can to remain committed to serving its statutory mission – a mission dedicated to driving greater private investment in the state's economy through accelerating the deployment of green energy to lower the burden of energy costs on Connecticut's families and businesses.

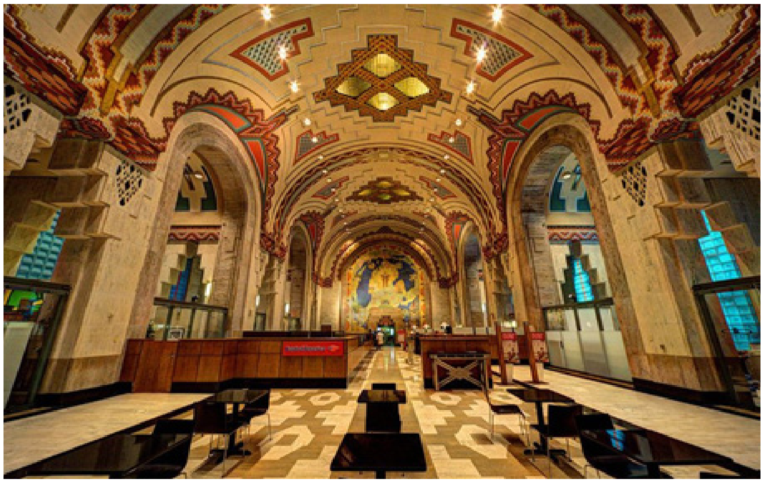
19 Eversource Energy and Avangrid receive nearly $240 million a year from the Conservation and Load Management Fund, Regional Greenhouse Gas Initiative, and Conservation Adjustment Mechanism to provide incentives to households and businesses for energy efficiency – over $70 million (or 30 percent) of that funding a year was swept in each of FY 2018 and FY 2019.

20 Cap and trade allowance proceeds from the Regional Greenhouse Gas Initiative are distributed in the following manner – 70 percent to Eversource Energy and Avangrid, 23 percent Connecticut Green Bank, and 7 percent DEEP.

21 Connecticut Green Bank receives nearly $30 million a year from the Clean Energy Fund and Regional Greenhouse Gas Initiative to attract private investment in Connecticut's green economy – over $16 million (over 50 percent) of that funding a year was swept in each of FY 2018 and FY 2019.

Sparking a Green Bank Movement – A Gateway to Inclusive Prosperity

> *"Founded on principles of faith and understanding, this building is erected for the purposes of maintaining and continuing the ideals of financial service which prompted the organization of this institution."*



Guardian Building in Detroit, Michigan - Otherwise Known as the Cathedral of Finance

The words on the ornate mosaic located in the front lobby of the Guardian Building, a famous Art Deco building located in Detroit, Michigan, couldn't be any more apposite to the role of finance and faith. As a visitor turns their attention from the mosaic in the lobby towards a stairway on the right that leads to the entrance of a magnificent hall you are faced with a clock that hangs overhead. As most finance professionals know, time is an important factor in a transaction, however, eternity is an important factor to those with faith. As you enter this hall, the Cathedral of Finance as it is known, one can't help but feel that they are in a spiritual place. This place is situated in the heart of the financial district in a city recently ravaged by an economic depression, yet rises out of the ashes again like a phoenix.

Recently, a group of green bankers were assembled at a Green Bank Summit with the first non-profit green bank in the United States – Michigan Saves.[22] Michigan Saves had just eclipsed a milestone – mobilizing more than $100 million of investment in green energy in the state. To be exact, this non-profit organization has helped originate over 9,100 loans at a 20 to 1 leverage ratio of private to public funds that will save families and businesses nearly 5,600 GWh over the life of the green energy (i.e., renewable energy and energy efficiency) improvements while reducing nearly 4.2 MMTCO2 emissions from entering the atmosphere.

The Encyclical specifically calls out the need to deploy more renewable energy sources to substitute for fossil fuels causing global climate change.

22 Green Bank Summit in Detroit, Michigan on October 3-4, 2017.

“There is an urgent need to develop policies so that, in the next few years, the emission of carbon dioxide and other highly polluting gases can be drastically reduced, for example, substituting for fossil fuels and developing sources of renewable energy” (Laudato si’, 21).

It also speaks to the principles of energy efficiency.

“We need to take up an ancient lesson, found in different religious traditions and also in the Bible. It is the conviction that “less is more” (Laudato si’, 162).

The Green Bank Summit was to assist Michigan Saves in setting a new target – $1 billion of investment into the state’s green energy economy in the next 5 to 7 years. That is a lot of green energy investment intended to deploy the “less is more” lesson of reducing energy waste, and to support the reduction of carbon emissions.

“The misuse of creation begins when we no longer recognize any higher instance than ourselves, when we see nothing else but ourselves” (Laudato si’, 7).

Creating the nation’s first green bank took the audacity and vision of Connecticut’s political leaders – Governor Malloy with the bipartisan support of the Connecticut General Assembly. The Connecticut Green Bank has sparked a green bank movement. We have seen our model applied in New York, New Jersey, Rhode Island, and Montgomery County, Maryland, with more in the works, including Washington, D.C. And on a national scale, Senator Chris Murphy and Congresswoman Elizabeth Esty from Connecticut have proposed a National Green Bank Act to provide $50 billion in capitalization to subnational green banks at the state and local level modeled after the Connecticut Green Bank. Only time will tell whether or not green energy will be included in the national infrastructure policy debate. The Connecticut Green Bank has been sharing it’s work and presented best practices and lessons learned in Canada, China, India, South Africa, and across Latin America.

“Let us sing as we go. May our struggles and our concern for this planet never take away the joy of our hope (Laudato si’, 177).

Throughout our journey, our true purpose continues to reveal itself. Yes, the Green Bank helps people thrive and businesses grow, but we have come to appreciate that we innovate to transform lives. In our eyes, the ultimate measure of success for the Green Bank will be how well we address the adaptive challenge of providing society a gateway to inclusive prosperity.

Acknowledgements

I am a member of the Renewable Energy and International Law (REIL) Network.[23] I was asked by Leslie Parker to co-facilitate with Bruce Schlein of Citigroup and S.E. Monsignor Marcelo Sánchez Sorondo of the Pontifical Academy at the Vatican, a discussion on "Building a Just and Compassionate Society" at a REIL Roundtable at Columbia University's Earth Institute on October 26, 2017, which was funded by the KR Foundation. REIL wanted to have a conversation on the relevance of the Encyclical – *On Care for Our Common Home* by Pope Francis – to investments in solutions to address global climate change. In their words, REIL wanted to reflect on the lessons that could be learned from the Encyclical, to transform markets and finance. This essay, or reflection, focuses on faith and finance from a green banker's perspective – that green banks have the power to restore prosperity in our communities while healing the planet.

Much appreciation to Anthony Clark for his advice on the structure of this essay, and Reverend Megan Lloyd Joiner, Anthony's spouse, for giving me the courage and opportunity to deliver the Earth Day worship service at the Unitarian Society of New Haven on April 22, 2018. We indeed must all "Be the Change."

23 REIL is a small, informal, below-the-radar network of international climate change, sustainability, and clean energy experts. Its members represent the spectrum of actors: policymakers, private investors, technology developers, academics, activists, and others working on critical issues of sustainability, including increasing the deployment of cleaner, more efficient energy solutions. REIL acts as a catalyst. Its focus is on crossing silos, developing systems-oriented solutions, and bringing blue sky thinking to practical on the ground strategies. For a summary of REIL's 2016 Roundtable on the Laudato Si' at the Pontifical Academy of Sciences , see http://www.pas.va/content/accademia/en/events/2016/roundtable.html

About the Author

Bryan Garcia is the president and CEO of the Connecticut Green Bank the nation's first state-level green bank. The green bank model demonstrates how smarter use of public resources can attract more private investment in the green economy reducing the burden of energy costs on households and businesses, creating jobs in local communities, and reducing greenhouse gas emissions that cause global climate change. With its message of "inclusive prosperity," the Connecticut Green Bank won the "Innovations in American Government Awards" in 2017 by the Harvard Kennedy School's Ash Center for Democratic Governance and Innovation.

Before joining the Green Bank, Garcia was program director for the Yale Center for Business and the Environment. At Yale, Garcia led efforts to develop a leading global program responsible for preparing environmental leaders for business and society. There he was co-editor of two publications Carbon Finance: Environmental Market Solutions to Climate Change and Carbon Finance II: Investing in Forests for Climate Protection. Prior to Yale, he served as Connecticut's Climate Change Coordinator where he supported the Governor's Steering Committee on Climate Change. Early in his career, he was a U.S. Peace Corps Volunteer specializing in NGO capacity building and environmental education in the former Soviet Union in the Republic of Kazakhstan.
Bryan is the Co-Chair of the Financing Solutions Working Group of the State Energy Efficiency Action Network (SEEAction Network), on the boards of the Institute for Sustainable Energy at Eastern Connecticut State University, University of Connecticut School of Engineering, Yale Center for Business and the Environment, Institute for Sustainable Communities and recently joined the Board of Directors of Sustainable Connecticut.

He holds a B.S. degree in political economy of natural resources from U.C. Berkeley, M.P.A. in public and non-profit administration and an M.B.A. in finance from New York University, and an M.E.M. degree from Yale University.