Advancing an equitable clean economy by leveraging the new federal Opportunity Zone program could greatly magnify the economic development benefits of Opportunity Zones and accelerate the U.S. shift to clean energy and resilience. Opportunity Zones were codified in The Tax Cuts and Jobs Act of 2017 in a new section of the Internal Revenue Code (1400Z1), which established tax incentives for investors in Opportunity Funds (OZones). The OZone provision was designed to spur investments of patient capital in predominately low- and moderate-income communities across the United States.

The first and second set of federal rules for OZones have made it clear that equitable clean economy projects are eligible for OZone investment. However, it will take creative ideas, new structures, and cooperation across sectors and disciplines, including the private sector, government, and community organizations, to fully tap the opportunity in ways that deeply benefit low- and moderate-income communities.

This paper is intended to help spread the word about the opportunity to advance an equitable clean economy in OZones and provide ideas for those who see themselves as stakeholders – impact investors, developers already working in low- and moderate-income communities, community organizations, local governments, and community foundations -- to plug in. The paper describes the potential benefits of a clean economy play in OZones, the way that OZone rules support such a play, the interest of investors in an equitable clean economy in OZones, the emergence of Opportunity Funds focused on clean economy, how experienced community Investors are innovating around clean economy in Opportunity Zones, the continuing financing challenges (which are gradually being addressed), and the capacity gap that can be addressed if given attention now.

1 Julia Parzen (julia@juliaparzen.com) is a co-founder of Working Assets, one of the first social investment fund families, and Urban Sustainability Directors Network and co-author of The Guide to Greening Cities. Graham Richard (gr@grahamrichard.com), an expert on clean economy investment in Opportunity Zones, is the former CEO of Advanced Energy Economy and mayor of Fort Wayne, Indiana.
The opportunity is too big to miss. Darren Walker, Ford Foundation, has said that the Opportunity Zones program is the biggest economic development initiative in 50 years to spur investments of patient capital in predominately low-income communities. Some market watchers are predicting $200 to $300 billion in investment. The lower cost of capital that Opportunity Zones offer means many more clean economy projects that are located in low- and moderate-income neighborhoods may now become financially attractive. The urgency to address climate change, curtail its disproportionate impacts on low- and moderate-income people, and create new economic opportunity in low- and moderate-income neighborhoods is palpable.

The key players are gathering. Opportunity Fund investors are increasingly interested in clean economy. Clean energy developers are more slowly, but also, entering the zone. Community investors experienced in working in low- and moderate-income neighborhoods are rapidly innovating around clean economy in opportunity zones.

All of the interest, innovation, and leadership will lead to a growing pipeline of deals in Opportunity Zones. Still, the process could be faster and the impact multiplied if there were broader knowledge of the opportunity, coordination, sharing, and rapid dissemination of models and processes to support local deal development, help local governments set the table, and ensure projects maximize the benefits for communities.

**Why Make an Equitable Clean Economy Play in Opportunity Zones:** Accelerated investment in clean energy and resilience is essential to reduce the impacts of climate change. Investment in local power production, microgrids, EV charging, batteries, and broadband also can improve the resilience of projects and neighborhoods. At the same time, clean energy investments can lower energy costs and improve the economic position of the 16 million Americans paying more than 10% of their total income on utility bills.² According to a new report from Brookings Institution, workers in clean energy earn higher and more equitable wages when compared to all workers nationally and many of the relevant occupations have lower educational requirements than average. At the same time, the current clean energy economy workforce is less racially diverse than other occupations nationally.³ There also is a largely missed opportunity to grow minority-owned businesses through investments in the clean energy economy. NGOs like GRID Alternatives and Elevate Energy have demonstrated the potential through their linkage of projects to not only training for local residents, but also contracts for minority owned businesses.

Many Opportunity Fund investors will appreciate the clean economy opportunity. According to Cushman & Wakefield, the opportunity zone program has visibility with high net-worth investors, many of whom have been driving greater interest in social

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³ [https://www.brookings.edu/research/advancing-inclusion-through-clean-energy-jobs/](https://www.brookings.edu/research/advancing-inclusion-through-clean-energy-jobs/)
impact funds and calls for “socially responsible investing.” Millennials are leading the charge (86% vs. 75% of the total population in 2017) for social impact, according to the Institute for Sustainable Investing’s 2017 Sustainable Signals report. Julia Shin, VP & Managing Director Impact Investing, Enterprise Community Investment, Inc., believes that the rubric of climate change, renewables, and resilience is resonating with these investors. Offering clean economy opportunities is a way to stand out from the crowd.

Most Opportunity Fund investors are looking for appreciation of Opportunity Zone projects. Making sure OZone projects are green buildings can enhance appreciation. According to findings of a study produced for USGBC, Dodge Data & Analytics World green Building Trends 2016 SmartMarket Report, increasing consumer demand has pushed the world’s green building market to a trillion-dollar industry. Building owners reported a 14 percent savings in operational costs over five-year savings for new green buildings and 13 percent savings in operational costs over five years for green retrofit and renovation projects. Building owners also reported that green buildings—whether new or renovated—commanded on average a 7 percent increase in asset value over conventional buildings. In addition, investment in local power production, microgrids, EV charging, and batteries will improve the energy resilience of projects and neighborhoods.

Some developers that want to rehab buildings will find it hard to meet the OZone requirement to double the adjusted basis in their property. Adding solar and energy efficiency using existing local, state, and federal incentives in many cases can be revenue positive, contribute to the 100% increase in adjusted basis, and improve affordability for residents. Katie Roskam, Varnum LLP in Grand Rapids, has noted that real estate developers in Opportunity Zones are trying to find costs they can capitalize into property development to increase value.

The Tax Advantages of the Opportunity Zone Program: The Opportunity Zones program offers three tax benefits for investing in low-income communities through a qualified Opportunity Fund. The first is a temporary deferral of inclusion in taxable income for capital gains reinvested in an Opportunity Fund. The deferred gain must be recognized on the earlier of the date on which the opportunity zone investment is disposed of or December 31, 2026. The second tax benefit is a step-up in basis for capital gains reinvested in an Opportunity Fund. The basis is increased by 10% if the taxpayer holds the investment in the Opportunity Fund for at least 5 years and by an additional 5% if held for at least 7 years, thereby excluding up to 15% of the original gain from taxation. The third tax benefit is a permanent exclusion from taxable income of capital gains from the sale or exchange of an investment in an Opportunity Zone project.

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4 Cushman & Wakefield, In the Opportunity Zone, November 2018.
Fund if the investment is held for at least 10 years. This exclusion only applies to gains accrued after an investment in an Opportunity Fund.

The opportunity to permanently exclude 15 percent of deferred gain is available only for investments made through December 31, 2019. However, according to Matt Reilein, who is leading community development for the Cresset-Diversified QOZ Fund, there will be investment in Opportunity Zones up to September 2026.

The tax advantages of the Opportunity Zone program can translate to better projects with greater benefits to communities. Experienced developers in low- and moderate-income neighborhoods are finding that they can make more projects works with more enhancements. According to Naomi Sable, Sustainability Community Associates in Cleveland, an Opportunity Zone Investment helped make the Tappan housing project possible and allowed it to include 60% workforce housing within a market-rate building and invest in the retail component of the project.7

The Opportunity Zone program also can support more patient community-building and place-making. For Bo Menkiti, Menkiti Group, a primary reason to pursue the opportunity zone fund is because investors must keep their capital invested for a full decade to realize the maximum tax benefits. This gives them a stake in a neighborhood’s long-term success that an investor with a three- to five-year time horizon may not have.8

The Opportunity Zone program also offers the potential for simpler capital stacks. About 80% of the Tappan mixed-use project in Cleveland is funded through an Opportunity Fund. Funding so much of the project’s cost from a single source is new for urban development projects in Cleveland, according to Josh Rosen, Sustainable Community Associates.

The Dark Side of Opportunity Zones: Many stakeholders who live in or care about low- and moderate-income communities expect that Opportunity Zones will hurt these communities. The program currently lacks requirements to achieve or even report on benefit to current community residents, although this could change.9 As demonstrated in a recent report by LOCUS, a national coalition of real estate developers and investors who advocate for sustainable, equitable, walkable

7 [https://www.crainscleveland.com/real-estate/tappan-apartments-tap-tremont-opportunity-zone](https://www.crainscleveland.com/real-estate/tappan-apartments-tap-tremont-opportunity-zone)
9 On May 6, 2019, Treasury announced that they are seeking further comments regarding impact tracking and data gathering. In particular, Treasury specified that “Comments could address (A) suggested measures that would signal improved economic development in local target markets as well as spillover to neighboring areas, (B) measures of job creation specific to the distressed community, (C) who would collect the data, (D) the frequency of data to be collected, and (E) sources from which to collect data.”
development, some Opportunity Zones are in neighborhoods where there is high potential for development to displace current residents.\(^\text{10}\)

Those who most fear the negative consequences of the Opportunity Zone program, are putting their energy into minimizing harm, including increasing the reputational risk of investments in OZones that don’t benefit current residents, seeking a “social impact” quid pro quo for projects that need something from the local government, whether zoning, land, or financing providing incentives, encouraging the use of additional credits like the New Market and historic tax credits (which introduces those existing programs’ guardrails), and offering support and additional incentives to desirable projects. U.S. Impact Investing Alliance and the Beeck Center at Georgetown University have released an opportunity zones framework for ensuring that opportunity zone returns accrue equally to communities and to investors. However, as, Kevin Irby of Threadspan, urged on a December 2018 OZones webinar for 200 interested Sustainable Agriculture & Food Systems Funders, despite the possible threats, it is worth taking a position of optimism tempered by a healthy dose of reality.\(^\text{11}\)

**The Optimistic Approach to Clean Economy in OZones:** One of the areas where it is worth taking a position of optimism is clean economy investing in Opportunity Zones. The lower cost of capital that OZones offer means many more clean economy projects that are located in low- and moderate-income neighborhoods may now become financially attractive, according to Bert Hunter, Connecticut Green Bank. Opportunity Zone-based community solar projects can generate an IRR that is as much as 30% higher due to the OZone federal tax benefits. The launch of the OZones program already has accelerated experimentation and innovation around clean economy and resilience investment that benefits low- and moderate-income communities and neighborhoods, creating an opportunity to escalate the growth of this market.

There is almost universal agreement now that clean economy investments qualify for Opportunity Fund investment. Renewable energy projects have similar characteristics to real estate. They both are long-term, place-based investments. Renewable energy and energy efficiency produce a reliable stream of revenue as real estate does. These projects can meet the Opportunity Zone 90 Percent Asset Test, the requirement to provide substantial improvement to the property, and the requirement to derive income directly from business in the Opportunity Zone. (In order to ensure that the designated zones receive benefits from the program, the QOF must hold at least 90 percent of its assets in qualified opportunity zone property. These assets must be newly constructed, or substantially improved and the business must derive 50 percent of gross income from active conduct of business in an opportunity zone.)\(^\text{12}\) In addition, there is extensive overlap in the type of property that qualifies for the QOZ incentive, the investment tax credit (ITC), and production tax credit (PTC) for

\(^\text{10}\) [https://smartgrowthamerica.org/program/locus/opportunity-zones/](https://smartgrowthamerica.org/program/locus/opportunity-zones/)

\(^\text{11}\) [https://www.confluencephilanthropy.org/Will-Opportunity-Zones-Benefit-Marginalized-Communities](https://www.confluencephilanthropy.org/Will-Opportunity-Zones-Benefit-Marginalized-Communities)

renewable energy products, which may boost the value of the ITC and PTC even while the credit rates are sun-setting. Specifically, all three incentives require an ultimate investment in tangible property that is used in a trade or business (ITC and PTC qualified assets also must be personal property).  

The second tranche of Opportunity Zone guidance addressed the biggest outstanding legal questions facing clean energy investment by Opportunity Funds. One major question was whether utility scale renewable energy could meet the requirement for earning its revenue in the Opportunity Zone if the power is sold outside of the OZone. The most recent guidance allows projects to look not just at where customers are located, but alternatively at the location of employee hours, tangible property, or management functions of the business. The second tranche of regulations also addresses part of the concern about depreciation recapture, which had muted enthusiasm for solar because it would have eroded the tax-free 10-yr exit. Depreciation recapture could still discourage multi-project funds, but there seem to be ways around it.

Because of other clarifications in the second tranche of federal guidance for the OZone programs, brownfield sites also have potential for clean economy development, where it is the highest and best use of the property. Jon Grosshans, US EPA, sees Opportunity Zones as made for brownfields redevelopment because so many brownfields are in zones and properties that have been vacant for 5 years are not required to double their adjusted basis. The 2018 Federal Brownfields Utilization, Investment, and Local Development (BUILD) Act funding prioritizes the development of renewable energy and energy-efficient projects. Grants even include job training so that developers can include a workforce component. Driven by this change and new state policies, such as the requirement in the Illinois Future Energy Jobs Act (“FEJA”) that the Illinois Power Agency acquire RECs from new brownfield site solar photovoltaic projects, demand for solar on brownfields is growing.

Additional clarifications in the second tranche of regulations related to the gross receipts of businesses earned in Opportunity Zones and a working capital safe harbor have improved opportunities for clean economy business development. These change are encouraging investors to invest in operating businesses in OZones, including providing growth capital to clean energy developers.

**Opportunity Fund Investors Are Increasingly Interested in Clean Economy:** According to Chris LeWand, Global Clean Energy Practice Co-Leader at FTI Consulting. “Commitments are being made to renewable energy projects [in OZones], and these are incremental to the capital pool traditionally available. There will be a high level of demand for shovel-ready renewable energy projects, as only investments made in

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13 https://www.jdsupra.com/legalnews/renewable-energy-leveraging-the-68512/


16 Dan French, Brownfield Listings.
2019 will benefit from the full 15% capital gains reduction. However, post-2019, Opportunity Zones will continue to offer significant benefits to investors from a capital gains deferral or avoidance perspective.”17 Bert Hunter, Chief Investment Officer, CT Green Bank, also expects investments in clean energy to be increasingly attractive to Opportunity Funds because they have low technology risk, generate stable or growing cash flow, generally are low/moderate risk to equity investment, offer cash flows that last for 15-25 years, offer straightforward ongoing project management and can be leveraged through bank loans.18

Mainstream investors in Opportunity Funds are pursuing clean energy portfolios. The Obsidian Opportunity Fund managers say they have a large pipeline of shovel-ready utility-scale solar projects in Oregon. They expect Obsidian’s Opportunity fund to provide hundreds of millions of dollars initially, with later capacity to invest $1 billion in solar PV. Decennial Group, a new Opportunity Fund plans to invest $1 billion in development projects throughout the U.S. Heartland, including renewable energy investments, which are led by David Pavlik of Chicago renewable energy firm 11 Million Acres.19 For an extensive new life science and wellness community on the old Michael Reese Hospital site, Decennial anticipates including a microgrid to power buildings development through solar, geothermal and other forms of renewable energy.

Cody Evans, Homecoming Capital, has secured capital from an investment group that wants to invest in sub-utility and small utility scale solar (distributed generation) in low-income communities across the US. Evan’s initial goal is to figure out the most efficient method of pairing Opportunity Fund investment with the ITC. For sub-utility projects, he is interested in rooftop and ground level solar projects and both single family and multi-family residential buildings, including naturally occurring affordable housing (NOAH).

Impact investors also are interested in clean economy. Arctaris Impact Fund, LP, which received $15 million in investment guarantees from the Kresge Foundation, intends to raise $750 million for projects that offer market rates of return and will range from $10 million to $50 million. 30% will be investments in alternative energy, telecommunications infrastructure (ex. 30 miles of broadband), and real estate infrastructure projects. One project is a solar field that is part of an industrial park in Flint, Michigan. The solar field will help to attract businesses to the park because of the savings on electricity and rent.20

CapZone Impact Investments LLC is developing Opportunity Zone projects and other Environmental, Social and Governance plus Resilience investments for Social Impact at

17 https://fti-intelligenceresearch.com/are-opportunity-zones-truly-an-opportunity-for-renewables/
Scale, including multifamily affordable housing and sustainable energy projects that benefit low-income communities. CAPZone is exploring the potential to create an open source platform to help identify dead malls and other properties for sub-utility scale solar installations. CapZone also is in discussion with the Coalition for Green Capital about investing in a Green Bank Solar Fund that would itself investing in individual solar project LLCs.

Ross Baird, the founder of Village Capital, recently launched Blueprint Texas, the first in a planned series of geographically focused investment funds of $50 to $100 million each to promote inclusive economic growth. Blueprint Texas is an Opportunity Fund that will make clustered investments in ecosystems of real estate and operating businesses that serve community needs and create local jobs. The firm is exploring models in which, for example, it eventually sells real estate holdings to community-resident shop-owners, who have been tenants in one of the portfolio’s developments.21 According to Graham Richard, Blueprint Texas is seeking developers for Net Zero buildings/development.

Additional Opportunity Zone Funds that report that renewable energy is part their investment focus include 1787 Capital, Activated Capital, Cresset-Diversified, D.R.E.A.M., Garnett Station Partners, HeroHomes.com, Propel, and SC. Some of these, like Cresset-Diversified, will only look at the clean energy market after they have proven basic real estate investments. According to Matt Reilein, the Cresset-Diversified QOZ Fund will focus on basic real estate transactions in the short term. However, they will look at the energy market in the medium term. Reilein believes other funds are likely in the same place. A lot of rural OZones, in particular, could be prime candidates for wind or solar. In one or two years, when the OZone system has been tested and there is clarity about regulations.

A variety of residential and commercial developers and solar developers are creating Opportunity Funds to help scale their pipelines, including Norfolk Solar QOZ Fund, Chart House Energy LLC, Teachers Village Qualified Opportunity Fund, Solar Chicago Investment Fund, and Menkiti Group and LISC.

The Norfolk Solar QOZ Fund is offering to install solar at no cost on businesses and non-profits in qualified opportunity zones in Lamberts Point, Park Place and Berkley as well as other neighborhoods. The Fund also is working with solar installers to offer residents in those communities on-the-job solar training.

Chart House Energy LLC, another solar developer, is targeting Opportunity Zones for solar projects in Michigan, also while also hiring project teams from the neighborhood and providing job training for them. Rob Rafson, founder of Chart House has created an Opportunity Fund for the $15 million of projects it expects by 2020. Chart House has completed OZone solar projects in Ypsilanti and Detroit and has projects underway in Muskegon Grand Rapids and Flint.

The Coalition for Green Capital (CGC) is piloting a concept for Opportunity Fund investment in Iowa where a solar developer wants to construct and operate solar generation in 11 facilities at a cost of $12 million.

21 https://impactalpha.com/blueprint-local-texas-fund-is-a-blueprint-for-investors-betting-on-their-hometowns-and-the-businesses-bringing-them-back/
More **Clean Energy Developers Are Noticing Opportunity Zones**: According to Chris LeWand, Global Clean Energy Practice Co-Leader at FTI Consulting, a top financial consulting firm, one of the largest the concept of OZones is **beginning** to be understood by the renewables industry because of recent presentations to WEEA, SEEA, and other trade associations. Woolsey McKernon, Senior VP at CleanFund, one of the largest direct lenders of C-PACE, believes that interest will grow and many marginal and smaller clean energy projects will be developed in smaller OZone communities with commercial PACE. CleanFund is marketing the alignment of C-PACE and OZone investment.

Some solar developers that already focus on access for low and moderate-income residents quickly leveraged Opportunity Zone advantages. See the Norfolk Solar QOZ Fund and Chart House Energy LLC examples above. According to Jon Bonanno at New Energy Nexus, the Opportunity Zone program also likely will expand the addressable market for Class B and Class C C&I solar. Developers will be able to take more risks on Power Purchase Agreements, which could open up this market. More could step up. National Trust Community Investment Corporation (NTCIC), which has completed 1.5 billion in tax credit deals, is encouraging solar developers and sponsors in OZones to seek equity from Opportunity Funds as a possible means to reduce development costs and bring in less expensive capital than current debt providers.

**Community Investors Experienced in Working in Low and Moderate Income Neighborhoods are Innovating Around Clean Economy in Opportunity Zones:** A variety of successful community investors are actively seeking ways to use Opportunity Zone incentives to accelerate the clean economy. These organizations include Enterprise, LISC, NEWHAB, California Clean Energy Fund and New Energy Nexus, Alliance to Save Energy, The Coalition for Green Capital, Climate Access Fund, Groundswell, CEI, SPI Partners, National Housing Trust, National Trust Community Investment Corporation, and GRID Alternatives, among others.

Enterprise is seeing high demand for its expertise and experience in community investing from mainstream investment managers for Opportunity Funds. Making buildings healthier and operationally more efficient is common as part of Enterprise’s approach to affordable housing preservation and is in the demonstration phase for LIHTC projects. Enterprise’s real estate model includes ways to take advantage of the Investment Tax Credit, Historical Tax Credit, and other incentives when underwriting real estate, so that it is prepared now to fund renewable energy and energy efficiency as part of real estate projects. As it scales up its Opportunity Funds, Enterprise plans to move beyond real estate to also invest in operating businesses, including possibly

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22 [https://fti-intelligencecom/are-opportunity-zones-truly-an-opportunity-for-renewables/](https://fti-intelligencecom/are-opportunity-zones-truly-an-opportunity-for-renewables/)
24 Merrill Hoopengardner and Karin Berry.
financing solar and energy efficiency as a business model. Esther Toporovsky is helping Enterprise explore the development of an Opportunity Fund guided by sustainability principles.

Enterprise Community Partners and the other SPARCC partners, NRDC, the Federal Reserve Bank of San Francisco and the Low Income Investment Fund, may develop tools for community members to advocate for equity in OZone investment. Enterprise also is on the advisory council for NEWHAB (Network for Energy, Water, and Health in Affordable Buildings), which is considering creating programming to help communities to impact the trajectory of opportunities for equitable sustainability investments in OZones. Energy Efficiency for All (EEFA), a part of NEWHAB, is pulling together best practices for CDFI investment in EE, renewable energy, and resilience in multifamily housing. It is not yet focused on OZones, but will be later in the year.25

George Ashton, managing director for strategic investments at LISC, who is leading its work on Opportunity Zones, has a background in solar and is on the board of GRID Alternatives. LISC, like Enterprise, is set up to take on real estate deals that include solar and energy efficiency for its real estate-centered Opportunity Funds. Ashton believes that adding solar and energy efficiency could help some building rehabbers meet the OZone requirement for the "substantial improvement" of existing property, which is to double the adjusted basis in that property. LISC, for example, has partnered with the Menkiti Group to create a $100 million Opportunity Zone fund to invest in neighborhood development, including housing and commercial development. Starting in Anacostia in DC (MLK Gateway) and Worcester, MA. Menkiti Group also is looking at Baltimore, Charlotte, Raleigh, Atlanta, Birmingham, Jacksonville, and Bridgeport. Most of Menkiti Group’s buildings are LEED certified.

Jon Bonanno is leading the Clean Energy in Opportunity Zones effort at New Energy Nexus/CalCEF by developing My OZ Fund (http://myozfund.org/), a digital platform that would allow entrepreneurs to quickly create fully compliant Qualified Opportunity Funds. California Clean Energy Fund (CalCEF) connects investors to clean energy entrepreneurs from low-income and disadvantaged communities, while New Energy Nexus runs a network of incubators and accelerators. Bonanno also is bringing together California leaders of clean energy projects, OZ capital sources, and government to explore potential transactions that will include storage, EV charging, energy efficiency, water efficient, and waste.

Alliance to Save Energy (Jason Hartke) is working on a framework for new prosperity investment, leveraging the OZones program to achieve cleaner, more resilient, and affordable energy in low- and moderate-income communities. It hopes to encourage investors, developers, and local governments to adopt its sustainability or ESJ criteria through a suite of activities that includes investment criteria for affordability, efficiency, work force development, local hiring, etc. that would be developed with multiple partners; case studies for how to maximize returns and minimize risk;

25 Krista Egger, Enterprise Community Partners.
outreach and advocacy; identification of investment ready projects in OZones; guidance to a suite of investments, and a tracking mechanism to score and scale progress.

The Coalition for Green Capital (CGC) green bank members have been hearing from solar developers with which they have partnered in the past that they need more equity to serve their growing pipelines. Christopher Scott, CGC, is piloting an Opportunity Zone model that its members could roll out to provide more capital to solar developers doing power purchase agreement (PPA) projects in OZones. CGC would form a wholly owned for-profit subsidiary (CGC Sponsor LLC), which would receive equity investment from Qualified Opportunity Funds, developers and tax equity investors. These funds would be combined with debt financing. The CGC Sponsor LLC would invest in state-specific Green Bank Solar Funds, which would in turn invest in individual project LLCs. CGC is working with its attorneys to see if the proposed pilot can work.26

Climate Access Fund is a new Maryland green bank, whose fiscal sponsor is Coalition for Green Capital. Lynn Heller, Founder and CEO, is seeking to expand access to community solar for low- and moderate-income households in Maryland. It is just beginning to reach out to test a possible model for leveraging Opportunity Funds as part of the capital stack for rooftop community solar on large commercial buildings where the solar would be sold to LMI households in the OZone.

Emily Robichaux, Director of Finance and Product Development, Groundswell, looked at a sample portfolio of projects to see if layering in Opportunity Fund capital could make more projects pencil out and concluded that Opportunity Fund capital would not make a big difference. Robichaux was more intrigued by the potential to invest in solar developers that work with low- and moderate-income communities. There could be more investment appreciation potential and community benefit in supporting solar businesses owned by people of color. This is not an opportunity that Groundswell will pursue at this time. Groundswell will continue to explore the potential from adding Opportunity Fund capital to its projects that are situated in OZones.

CEI, a CDFI, has been expanding its renewable energy investment portfolio in Maine, providing financing for new and expanding businesses and funding municipal and nonprofit solar projects through power purchase agreements. It has done a billion dollars in new markets credits, knows how to build the capital stack and knows clean energy funders. John Egan, Chief Investment Officer at CEI, is exploring how to use OZones to increase investment in Maine.

SPI Partners, which provides strategic financial advisory and consulting services for the sustainable real assets sector, is working with the Coalition for Green Capital on how to leverage the Opportunity Zone program. SPC is exploring the possibility of developing a $100 million tranche of small solar projects (under 1 MW each) that

26 Christopher Scott, Director, Coalition for Green Capital.
would use concessionary debt capital and Opportunity Fund equity capital. SPC capital has reached out to developers and nonprofit housing organizations across the nation to study potential deal structures. SPI Partners also is working with CDFIs in several cities to figure out how to leverage OZones to fund energy efficiency and solar as part of a strategy to keep low-income housing affordable.

National Housing Trust (NHT) in partnership with Enterprise Community Partners has developed a portfolio-level solar funding model. They develop multiple solar projects across a property owner’s portfolio at one time, while at the same time maintaining ownership of the systems at the corporate-level. NHT/Enterprise have created a suite of documents and templates to map out the relationships between the solar investors and the participating properties. NHT and Enterprise Community Partners are looking at the potential to use this model in Opportunity Zones to attract Opportunity Fund investment. ITCs will sunset. The partners are asking if OZones could fill this gap. NHT and Enterprise are figuring out now what are the parameters for use of Opportunity Fund investment, what are the return expectations, what is the minimum deal size, how the deals need to be structured, and does the OZone equity make up for lost ITC credit.

NTCIC has completed $1.5 billion in tax credit deals, including most recently ITC investments. It has primarily been working to make sure that the Opportunity Zone program doesn’t negatively affect historic preservation and will work well with other existing incentives. An internal team is exploring whether there is a profitable way to combine tax credit equity and Opportunity Fund equity in one fund to support historic preservation projects. This could include providing mezzanine financing. It also is trying to figure out how to avoid the depreciation claw back, perhaps by adding some debt financing to an Opportunity Fund. In the meantime, it has entered five deals where an Opportunity Fund is providing sponsor equity and NTCIC is providing tax credit equity for solar projects in Massachusetts and South Carolina. It also is encouraging developers and sponsors in OZones to seek equity from Opportunity Funds as a possible means to reduce overall development costs and juice equity by bringing in less expensive capital than current debt providers.

GRID Alternatives recently was selected to receive a $1 million award from the U.S. Department of Energy Solar Energy Technologies Office (SETO) to develop new ways to accelerate the adoption of photovoltaic (PV) technologies. The project, in partnership with Distributed Resource Ventures (DRV), will build, test, and scale a financing and project development platform that will expand solar access to low-to-moderate income (LMI) households. GRID Alternatives and DRV have expressed some interest in tapping Opportunity Fund investment.

There Are Financing Barriers to Address: Much of this innovation is addressing the remaining financing challenges for clean economy in Opportunity Zones. One

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27 Esther Toporovsky, Senior Program Director.
28 Merrill Hoopengardner and Karin Berry.
challenge is depreciation recapture where federal tax rules require recapturing the depreciation deduction as income when a property is sold. Another challenge is the desire of Opportunity Fund investors to exit at 10 years and to achieve capital appreciation through their investments. A third challenge is finding a way to fund energy efficiency using Opportunity Fund equity, perhaps by expanding the use of Power Purchase Agreements (PPAs) for energy efficiency. A major challenge is the increased deal complexity and cost of adding an additional (and separate) equity investor combined with the difficulty of aggregating what are often small projects. For those seeking to maximize community benefit, another challenge is to find ways to build resident ownership of projects. Innovators are making progress and piloting solutions. A valuable step could be to bring together the innovators and leaders on both the supply and demand side to co-design realistic and achievable models for accelerating equitable clean energy in OZones.

**Depreciation Recapture:** Depreciation recapture could be a challenge for some clean economy projects. Depreciation recapture is the gain received from the sale of depreciated capital property that must be reported as income. While real estate is an appreciating asset, solar installations are depreciating assets. Depreciation recapture is assessed when the sale price of an asset exceeds the tax basis or adjusted cost basis. The difference between these figures is thus "recaptured" by reporting it as income. The Department of Treasury created a mechanism to help partners in QOFs avoid having to pay at least some depreciation recapture at sale.

Depreciation recapture can be avoided on a sale of the membership interest in a QOF, but not on a QOF’s sale of its underlying assets. According to DL Piper, this disparate treatment would encourage the use of single project funds.

According to Jonathan Tower, Managing Partner, Arctaris Impact Fund, OZone rules will allow deals to be carefully structured to avoid depreciation recapture in the case of solar farms, capital equipment under Section 45, and buildings with solar under section 1250. Arctaris Impact Fund includes some bank leverage and the debt provides a basis in the partnership that makes it possible to pay out the depreciation benefit. The rules for Opportunity Zones allow Preferred Stock or Preferred Interest as an allowable form of equity, which can allow CDFIs to reduce operating risk, improve the likelihood of an exit for the investor, and retain community ownership and/or adherence to the mission. This also may help with depreciation recapture.

**10-Year Exit:** Opportunity Fund investors want to exit in 10 years, while many solar investments are 20 years or more. Investors will want an early exit, which could be difficult to structure. This is not a problem just for solar projects. According to Rip Rapson, Kresge Foundation’s President, none of the 141 applicants that applied for funds were based on the 10-year exit.

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30 Michael Wiener, DLA Piper LLP.


support for Opportunity Funds had a theory about how they expect investors to exit funds. According to Suzanne Kim, SPIC Partners, which provides strategic financial advisory and consulting services for the sustainable real assets sector, it will be possible to refinance sub-utility scale solar projects to pay out Opportunity Fund investors at the end of 10 years. The projects will by then have proven their cash flows to commercial banks.

Obsidian Fund says it has a workable structure for taking out Opportunity Fund investors in utility scale solar projects in rural Oregon after 10 years. It is creating pools of solar equipment (property) in OZs. The energy produced is leased through power purchase agreements of 25 years. It attracts both equity and debt investors in the portfolio. The debt investors are paid out within the first 10-year period. The pool then owns the equipment, which still has 5, 10, even 15 years left on a power purchase agreement. Thus, it is possible to calculate a net present value of the cash flow that can be used to calculate what that ownership is worth. Obsidian sells the equipment back to the party that has the power purchase agreement at a price based upon remaining cash flow.

In January 2019, George Ashton (by way of Emily Robinson, Elevate Energy), who is leading LISC work on Opportunity Zones, said the 10-year buyout challenge is driving LISC to single asset funds. There has been concern that multi-asset funds would have to find someone willing to buy the whole fund out at the 10-year mark when OZ investment gains become tax-free. Ashton believes it is more likely to find someone to buy one building/project, not a bunch of small projects. Ashton added, however, that it might be that someone would purchase an entire portfolio of solar investments at year 10. In the most recent tranche of OZone guidance, Treasury created a defined process for winding down a multi-asset fund that is far more straightforward than the previous process. Still unresolved (awaiting the third tranche of guidance), is treatment of interim gains from sales during the 10+ year holding period.

**Desire for Capital Appreciation:** Another challenge is the desire of Opportunity Fund investors for capital appreciation. The biggest attraction for Opportunity Fund investors is that there are no capital gains taxes on the appreciation of Opportunity Zone projects rather than that there are savings on capital gains taxes on the prior capital gain invested in the Opportunity Fund. According to tax experts at JD Supra, investors can still achieve highly valuable tax deferral benefits, as well as elimination of depreciation recapture, which they say are sufficient benefits to attract investors.

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33. [https://kresge.org/content/mission-money-markets-6-takeaways-opportunity-zones-lois](https://kresge.org/content/mission-money-markets-6-takeaways-opportunity-zones-lois)

34. 26 states allow electricity customers to obtain power from an entity other than their local utility through a power-purchase agreement. Some that don’t allow Power Purchase Agreements (PPAs) allow solar leases (as in Florida) allow solar leases. In a PPA, the buyer only pays for the electricity produced by the solar panels. In a solar lease they pay a fixed monthly payment for the panels and can offset costs through electricity savings, which is why PPAs generally are preferred.

For some investors, rooftop solar and building energy efficiency may provide the appreciation they seek. As mentioned earlier, Dodge Data & Analytics World Green Building Trends 2016 SmartMarket Report\textsuperscript{36} captured that building owners report that green buildings commanded on average a 7 percent increase in asset value over conventional buildings.

It may be possible to reduce the amount of appreciation investors will require by setting the table for these investments with care. Local governments can make these projects easy for the developer so that they will not require as much appreciation. They can put together preferences and incentives and capital stacks to attract developers and investors.

Mission-driven investors and investors who are tied to specific communities may find the returns sufficient even where there is not substantial anticipated appreciation. Alternatives envisions PRIs from family offices and foundations that are looking for a close to market rate of return. David Nikoloff, vice president for real estate lending at Community First Fund, a nonprofit loan fund based in Lancaster, Pennsylvania, is depending on local investors who care about the region. He is targeting high-net-worth individuals with potential capital gains in the region and who know about the region.\textsuperscript{37}

A few community foundations are part of discussions about funding for OZone projects and filling investment gaps. The Oregon Community Foundation was at one point considering hiring someone to explore the potential for creating an Opportunity Fund for its donors. Community foundations are not only grant-makers, but also investment managers for their donors who are just the people who are likely to have appreciated business and real estate assets they may be ready to liquidate.

\textbf{Structuring Energy Efficiency Projects to Fit Opportunity Fund Requirements:} A challenge for energy efficiency is that Opportunity Fund investors need to receive all or most of their returns in capital gains. LLCs and partnerships commonly own assets and enter into PPAs for solar, fuel cells and CHP, which will produce capital gains. This is less common for energy efficiency improvements.\textsuperscript{38} However, there is interest in expanding PPA use for energy efficiency. Elevate Energy, for example, is hoping to explore the use of energy service agreements for energy efficiency improvements in NOAH multifamily housing.

\textbf{The Increased Deal Complexity of Adding an Additional (and Separate) Equity Investor:} Completing solar deals is further complicated by the fact that there must be an investor to take the renewable energy tax credits and another to put up the capital

\textsuperscript{36}http://fidic.org/sites/default/files/World%20Green%20Building%20Trends%202016%20SmartMarket%20Report%20FINAL.pdf
\textsuperscript{37}https://nextcity.org/daily/entry/small-cities-feel-the-clock-ticking-on-opportunity-zones
not provided by a bank or the renewable energy tax benefit investor. Often there is a need for additional structures like PACE. Sophisticated structures and multiple investors mean high costs for structuring and documentation and legal agreements. Even a $25 million pool of capital is small when there could be $1 million in documentation cost and fees. With OZones there must be a fourth party, which is the Opportunity Fund investor, adding complexity and cost.39

According to George Ashton (by way of Emily Robinson, Elevate Energy), who is leading LISC work on Opportunity Zones, there will need to be a minimum fund/project size in order to cover the cost of paperwork and legal and accounting for OZ fund investments. He believes the minimum will be around $5M. Another estimate is that a deal will have to be at least $2.5 million in size to be economical.40 If a fund tries to meet that threshold with multiple smaller solar or EE projects, an issue is how to get the OZ funds spent within 30 months on all the smaller projects.

**The Difficult of Aggregating Small Projects:** Many clean economy projects in OZones will be too small to meet the minimum size unless there is a way of aggregating projects, which is no easy matter, although some people are working on it. According to Suzanne Kim, SPIC Partners, each solar project has its own funding customization. It is difficult to cluster buildings using a similar financing strategy because there is a very fragmented market of smaller multifamily properties. As mentioned earlier, SPI Partners is trying to work through this challenge as it explores the possibility of developing a $100 million tranche of small solar projects (under a MW) that would use concessionary debt capital and Opportunity Fund equity capital.

**Building Resident Ownership of Projects:** Financing solar projects in a way that leads to local resident control is even more difficult.41 Co-Op Power is testing a tax-equity flip partnership (outside of the OZone context). Usually outside investors front the cash for a community solar installation, and in turn they receive the tax credits. The tax-equity flip allows the tax-equity investor to achieve their targeted return, and then flips their ownership from 95 percent to five percent. The 95 percent interest shifts to the community partner, giving them control of the installation. Cooperative Energy Futures, Co-Op Power in Massachusetts and New York and Local Clean Energy Alliance in Oakland are part of an informal group of community-focused solar energy

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developers trying to find creative ways to finance solar installations. The group has formed a People’s Solar Fund and is seeking more solar developers to join so that there will be scale and potential to negotiate better terms.

There is a Capacity Gap that Stands in the Way of Accelerating Deal Flow: The Innovators will find financial structures that address many of the financing barriers. Perhaps more daunting is the capacity gap that stands in the way of accelerating deal flow. Especially small and medium size local governments do not have the capacity to set the table for Opportunity Zone investment and many smaller communities feel that they have no leverage to make demands of investors. Rachel Reilly, Director of Impact Strategy at the Economic Innovation Group, says she is seeing lots of investors trying to find investment in OZone communities while these communities struggle with capacity issues. Michelle Moore, CEO of Groundswell, suggests the same is true for clean economy investment. Opportunity Zones can make a difference if there is help for the right people in the right places to structure projects.

Given the limited capacity to set the table for OZone investment, it is not surprising that there is not a bigger focus on clean economy yet at the local government level for Opportunity Zones. Even in California, where every local community has a climate action plan as required by law, few local governments initially explored the clean economy potential.

Local governments need a support program for advancing the clean economy in Opportunity Zones. Andrea Leweki, president of the Solar Foundation, believes that local governments need help with coordination, community outreach, and planning to make renewables attractive to investors. Dan Carol, who was the Senior Advisor to Governor Jerry Brown on Infrastructure and Energy, agrees that the success of Opportunity Zones will hinge mainly on whether or not small and medium sized cities have access to upfront project predevelopment, de-risking and expert technical assistance to help them develop an “investable” pipeline of projects.

Governors will do the most to assist local governments and this could include clean economy investment. For example, new governors from California, Colorado, Connecticut, Illinois, Maine, Michigan, Nevada, Oregon, and Wisconsin all support 100% clean energy. The State of California will have lessons to share, as it is supporting clean energy projects (solar, energy storage, hybrid, EV charging, EV fleet leasing, etc.) in the large majority of its DACs that also are OZones. DACs are disadvantaged communities most burdened by pollution that are targeted for investment of proceeds from the State’s cap-and-trade program.

43 https://nextcity.org/daily/entry/these-opportunity-zone-investors-want-to-support-local-businesses?utm_source=Next+City+Newsletter&utm_campaign=72bb9299de-Daily_781_COPY_01&utm_medium=email&utm_term=0_fcee5bf7a0-72bb9299de-43935421
44 Solar Foundation has relationships with about 40 communities that are solar ready.
Other local actors that are key partners for local government also need to be activated. Local government sustainability directors, for example, could have a positive influence on Opportunity Zone strategy in their jurisdictions. Many local communities have climate action, energy, or sustainability plans that are not being considered in OZone strategy development. Many sustainability directors already are working hard to advance clean energy, local sustainability, and equity.

The City of Atlanta, which is part of the U.S. Department of Energy Better Buildings Clean Energy in Low Income Communities Accelerator (as is Rochester, Cleveland, and DC), is partnering with Southern Alliance for Clean Energy, Southface Energy Institute and Partnership for Southern Equity to help residents of low-income neighborhoods to reduce their energy costs through energy efficiency appliances and distributed renewables. Southface is providing consulting support for additional Southern cities on how to take advantage of Opportunity Zones to implement sustainability work.

DC has had a Solar for All program since 2016, the goal of which is to provide the benefits of solar electricity to 100,000 low-income households, and to reduce their energy bills by 50% by 2032. Staff members who run this program are interested in finding ways to aggregate rooftops to lower costs and find ways to tap into Opportunity Zone capital.

Community organizations must have a leading role. According to staff members at Enterprise, many people in the community development space have begun to wonder how they can support sustainability through Opportunity Zones. Sustainability directors and community development leaders could be natural allies in urging equitable and sustainable projects for OZones, creating and an inside and outside game.

Community foundations could play an important role as conveners and investors. In Louisville and Baltimore community foundations are funding local government OZone staff champions. The Bland Foundation in Atlanta convened stakeholders to consider together how they could leverage Opportunity Zones. The Erie Community Foundation supported the creation of the Flagship Opportunity Zone Development Company as a one-stop shop for investors and project sponsors. Bert Feuss, senior vice president of investments at the Silicon Valley Community Foundation has said his organization may provide loans that improve the return to Opportunity Fund investors.45 The Oregon Community Foundation is collaborating with the Meyer Memorial Trust and The Ford Family Foundation to help ensure that capital from Opportunity Funds is targeted to rural and underserved communities throughout the state of Oregon.

Concluding with Optimism: The potential to leverage Opportunity Zones to advance an equitable clean economy is great. All of the interest, innovation, and leadership will lead to a growing pipeline of deals in Opportunity Zones. Still, the process could be faster and the impact higher if there were coordination, sharing, and rapid dissemination of models and processes to support local deal development, help local governments set the table, and ensure projects maximize the benefits for

communities. A valuable step would be to bring together the innovators and leaders on both the supply and demand side – investors, developers, local governments, to co-design realistic and achievable models and processes for accelerating equitable clean energy in OZones.