

Mike Barcik on Energy Efficiency: A Georgia Climate Digest Interview

Summary

Taking action on climate isn't just about solar panels and EVs, some of the most impactful ways to reduce your carbon footprint include less visible actions, like improving the energy efficiency of your home. In this conversation, Mike Barcik of Southface joins host Eriqah Vincent to talk about his nearly 30-year career in HVAC and energy efficiency, why buildings account for the largest share of U.S. energy use, and how Georgia families can take advantage of new incentives to make their homes more efficient, comfortable, and resilient.

Key Takeaways

- Buildings account for roughly 40 percent of U.S. energy use, more than transportation or industry, making energy efficiency one of the highest-impact climate solutions available.
- Southface, founded in 1978, created several nationally adopted programs, including a duct and envelope leakage testing certification and the EarthCraft green building certification, developed with the Greater Atlanta Home Builders Association and predating LEED.
- Georgia has some of the highest energy burdens in the country, with disadvantaged households sometimes spending 25 percent or more of their income on utilities, a compounding problem tied to poor housing quality, health issues, and mounting medical bills.
- Federal incentives through the Inflation Reduction Act, including point-of-sale rebates potentially worth thousands of dollars for heat pumps, are set to roll out through Georgia's state energy office, GEFA, with incentives available at least through 2032.
- Mike's mantra for homeowners: fix the building envelope first, then right-size efficient equipment, then take advantage of tax credits and rebates, and only then invest in renewables like solar, since solar panels can't fix a leaky, poorly insulated home.

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Eriqah Vincent: Hi, everyone, thank you so much for joining us once again. My name is Eriqah Vincent, and I'm excited to talk today to Mike Barcik from Southface. Hi, Mike.

Mike Barcik: Hi, Eriqah, thanks for having me.

Eriqah Vincent: Absolutely, absolutely — I'm excited to dig in with you about the amazing work you're doing, both at Southface, but also the work you've helped do with Drawdown Georgia, and with some of the toolkits you've helped us with. So let's jump right in — I'd love for you to tell us about yourself, and about the climate-related work you do at Southface.

Mike Barcik: Okay, well, thank you. My background is actually mechanical engineering, and I have a focus on HVAC, energy efficiency, and construction. I've actually been at Southface for 29 years, believe it or not, and I feel very fortunate, because mostly what I get to do these days is

our technical training — reaching out to professionals in our industry, building designers, architects, engineers, code officials, contractors, subcontractors, and really anybody else involved with our massive industry — manufacturers, utilities, and so on.

I'm secretly — I'm not ashamed — a very pragmatic environmentalist, and really, one of the best things you can do for the planet is just to make the built environment better, and that's why I love what I get to do at Southface. I'm also excited because every year, for I think 25 years now, I've been involved with current and former Southface folks and other volunteers — we weatherize and improve homes of seniors in our community. We focus on all the things we talk about in the Drawdown pages — air sealing, duct sealing, improving insulation, and even small things like cleaning out dryer vents, drainage, LED lighting, and pipe insulation. We knock out this really long list of upgrades, and this is all done as part of Decatur's three-day Martin Luther King Jr. service project, which I'm honored to have been part of since the very beginning.

Eriqah Vincent: Wonderful, fantastic — I love Southface, I've always loved Southface, and I've known quite a few folks who've worked there, really great people. So I'm excited to talk to you today, even if you didn't work at Southface, but that's just a perk for both of us. Your background is in engineering and some other pieces — what brought you to energy efficiency specifically as a field?

Mike Barcik: Yeah, it's really interesting, because I've learned about myself — I've just always hated waste, and always found wastefulness really frustrating. It could be single-use plastic, or somebody trying to heat an old, lousy building with a really inefficient furnace — just throwing away money and throwing away resources really bothers me. And it concerns me because I have children, and I think about how we have a finite amount of resources, and what are we taking, and what are we leaving behind, so to speak.

As you said, my background's in mechanical engineering, and I enjoy building things, so that was a natural connection, many years ago, to volunteering with Habitat for Humanity, building affordable housing — a huge part of my personal life, and sort of a hot button for me. It's kind of neat, because one of the Habitat houses I was working on got rained out, and I went to a different one, and that's where I met up with the person who was one of the founders of Southface. It changed my life, and probably changed his life too, I don't know if it was good or bad, but it was certainly a great connection, and helped set me on a path of really being able to do what I enjoy, and hopefully, again, just doing something better — I think that's a big driver for me.

Eriqah Vincent: Absolutely, absolutely. So, this seems like a silly question, and I kind of already know why, but I'd love to hear more about your passion around energy efficiency — you talked about building low-income housing, the work you did with Habitat, phenomenal outcomes for organizations like that. So why are you passionate about energy efficiency, specifically as a climate solution for Georgia? We know Georgia is our focus in this series.

Mike Barcik: It's a great question, but the answer is just because the impact is gigantic. If you think about it, the way we use energy in this country is roughly in thirds — about a third goes to transportation, about a third goes to industry, but the biggest third by far, in fact about 40 percent, goes into commercial and residential buildings. It's a little more homes than commercial, but almost 50/50 within that chunk. If you can make improvements there, the impact in terms of carbon is huge. But there are also a lot of other benefits — energy efficiency isn't just about, oh, I'm going to reduce my utility bill, there's much greater comfort, improved

health, better indoor air quality, compliance with code, a more peaceful and quieter indoor environment, a building that's lower on maintenance and more durable — and, of course, the obvious one, it costs less to operate. So there are many benefits besides the more obvious one of addressing climate.

Eriqah Vincent: Heard, got you, got you. So, I know you also work in Southeast Asia, and you also work with Southface's training facility, which I've been given a tour of, and it's a great place — if anyone ever has the opportunity to visit or tour it, it really is a great place, I think you all are doing great work. What's something that might surprise us about the work you do at Southface?

Mike Barcik: Well, it's kind of neat — Southface has actually been around since 1978, but we're still kind of unknown. We work mostly in the Southeast, but the reality is we've done work in literally every state, and some other places as well. I think it's kind of neat, we've created some programs and certifications that I personally have been involved in, and I'm excited because they're nationally known, but a lot of people don't know they actually started right here at Southface. A couple examples — we created a certification for professionals who test the leakage of your house and your ductwork, and that's used by the energy code, and adopted in, I don't even know how many states, around the country at this point.

I'm super excited to be attached to the fact, and I'm honored that I got to help create — 25 years ago, Southface partnered with the Greater Atlanta Home Builders Association, and we created the EarthCraft family of green building programs. It's homes, multifamily, light commercial, historic buildings, both new construction and renovation, and this program predates the probably better-known LEED program. Our foundation is just good, practical fundamentals of building science as the baseline, and I've got some numbers — to date, over 61,500 buildings, homes, and dwelling units have been certified in that program, which is pretty impressive.

And I'll make one more quick plug — very brand new, really hot off the presses, we were part of a Department of Energy Empower grant. We've recently developed some really neat online education resources, basically addressing the challenges of some of the technologies that Drawdown, in particular, is trying to promote — we refer to these as distributed energy resources, or DERs, because we need another acronym. It's really helping people get over the fear of the unknown of some new stuff, like onsite renewables, or, I want to put an EV charger on my house, what does that involve — and helping code officials and other implementers become more comfortable with that. So all of this content is free, it's on our learning management system — our website is southface.org, but this specifically is on a website called CleanEnergyClearinghouse.com.

Eriqah Vincent: Yeah, for sure, and we'll make sure we get those resources and links to everyone watching too, so they can go to those places. So, energy burdens — we know Georgia is one of the highest places, especially Atlanta, for energy burdens in the country, and for folks who might not know, energy burden refers to the amount of household income that goes out to paying for energy in the home. Atlanta and Georgia, in general, have some of the highest energy burdens in the country — I don't want to misuse statistics, but it's probably in the top five or ten in the states. So how does energy efficiency connect to equity in Georgia — energy burden being one of those pieces, but other pieces too?

Mike Barcik: A great question, and it's really compelling when you think that maybe an average household will spend about 3 percent of their income on utilities — gas, water, electricity, and so on — but there are some historically disadvantaged households that could spend as much as 25

percent, or even more, on their utilities. This can lead to having to make a horrible choice between the power bill, or food, or medication. A lot of times this is due to substandard housing — leaky, poorly insulated, terrible HVAC, terrible water heating and other appliances. What's sad to me is it becomes a compounding problem, because the folks in these houses can suffer from poor health, safety concerns like appliances that produce carbon monoxide, and other indoor air quality issues we've really learned about over the last couple decades — things related to mold, pest entry, terrible drainage. This affects the health of the occupants, allergies, asthma, and now you're layering on medical bills, which adds to the strain on an already limited budget. So, yes, I want to improve these homes because it reduces pollution and helps with carbon footprint, and that's really important, but more importantly, it's about improving the quality of life of often underserved folks.

Eriqah Vincent: Exactly, exactly, absolutely. So how does the work Southface does in this sector impact underserved communities, some of those communities you were just talking about, that suffer from energy burden for a myriad of systemic and structural reasons?

Mike Barcik: Yeah, well, I'm happy that Southface obviously has deep roots in issues of healthy and affordable housing, as we've talked about a bit. I personally do a lot of training, but a lot of our programs pay attention to these issues, and allow us to have some impact. For example, our EarthCraft Multifamily program, part of it pertains to something called a QAP, qualified allocation plan — trying to get the acronyms right — for low-income housing tax credits. By creating, enforcing, and verifying these guidelines, that's a role Southface plays, making sure the homes that are designed and constructed address these compounding issues, and the occupants' quality of living is clearly enhanced.

I've got some numbers on this — just last year, Southface inspected over 1,300 units, and we've certified over 4,500 units since the beginning of this program effort, so I'm really proud of that, that's a lasting legacy, and it's also our tax dollars, as citizens of Georgia, being spent wisely. Because, do you want to throw tax dollars into a project that's a building that's not well done, that falls apart, decays, isn't durable, isn't efficient, isn't comfortable? That's not something we want to be proud of. So I think this program does a lot, and I also need to make a plug — we have an advocacy team, and they do amazing work reaching out to communities and their leaders, to help us better understand their needs. Historically in the U.S., and specifically in Georgia, as you mentioned, we have marginalized communities that have really borne the brunt of climate change and a lot of energy inequity, and they don't have a voice in the decisions that affect them. So our advocacy work is really trying to focus on engaging these communities, engaging their leaders, trying to help us understand their needs and challenges, and help them feel empowered in the decision-making process.

It really is a two-way dialogue — we focus on the sustainable building part, and we're also trying to actively listen to and incorporate the insights of the people living in these buildings. So I think that's a very important two-way street, and I wanted to throw in — one thing our advocacy folks are currently working on is trying to raise awareness of the fact that there are tremendous energy rebates. Some are tax credits in effect right now, but very soon, coming very soon, through GEFA, our Georgia Environmental Finance Authority — I kind of say "our state energy office" — a lot of these are coming down from the Department of Energy, and getting people aware of what these incentives are, and many of these are about to hit — I'd say in the timeframe of end of Q4 2024, or early 2025. So if you're hearing us say, hey, heat pumps are a really good idea, and you're qualified, you can get an \$8,000 point-of-sale rebate, that's pretty attractive. So working with our state, with GEFA, has been a real pleasure.

Eriqah Vincent: So a couple of things you said that I think are really interesting — the first thing is, I love to hear when nonprofits talk about not going to the community and telling them what they think they need.

Mike Barcik: Yeah, yeah — parachute in and be the savior, that's not what we mean.

Eriqah Vincent: Exactly — hearing what they actually need, and doing the best they can to connect them to those resources, whether that organization has them or not, or connecting them to other organizations that should. So I love hearing that, and I'm glad you named it, because I think that's a super important lesson for all of us in the nonprofit sector. The other thing — you talked about some of the rebates coming down from GEFA, and I've heard a bit about this — how will folks take advantage of those opportunities when they come down later this year or early next year? What's the process for that?

Mike Barcik: Well, the goal in all this — I'm speaking to some of the larger — the nice thing about, for example, the IRA, that's the big one we all talk about, the Inflation Reduction Act — the advantage is it has a long life in its effect. We know these incentives are going to be around, I believe, until at least 2032. A lot of times, in the world of energy efficiency, we get incentives that are maybe for sure around till the end of the year, and sometimes we don't even know they exist until the end of the year comes along, and they say, well, they're kind of retroactively active — and how is that an incentive to do better? So I think the fact that we know this is going to be around, we know it's coming, there have been a lot of attempts to really make sure it's not just something wealthier Americans can take advantage of — there are incentives for everybody, but even greater incentives depending on your household income. I think that's really exciting. And the other thing is, how can we make this as simple as possible, and hopefully we can enforce it at the point of sale, which really simplifies it, because then it's not a bunch of paperwork you file for on your taxes. We're not 100 percent sure what this will look like, but I will say the good folks at our energy office have been working on this for some time, and I think they're really trying to be a leader and do it well — they share a lot with other state energy offices, I know this for a fact, because I've participated in some of their meetings. I really feel like Georgia is well set for when this hits, but the idea is to implement it — what we don't want is something that's out there, and then not enough people are taking advantage of it. So I think that's another role Southface can help play.

Eriqah Vincent: I think what this shows is that it's very easy to write off the South — I'm from New Jersey, I've been in Georgia probably almost 20 years now, very soon, but I think it's very easy to write off the South as a place where things like this can't happen, where energy efficiency programs, or clean energy, or renewable energy programs can't happen. Many people in Georgia — Southface included — have found creative ways to make these things happen in Georgia, and other places in the South are doing the same, and are, in my opinion, following Georgia's lead in not worrying about what the political climate is, but really saying, okay, this is the political climate, we know we have to work the inside game to figure that piece out, and also, what can we do within the confines of what we have right now, so we're not waiting for the political climate to turn over, which may take a very long or very short time depending on who you're talking to — but how are we working within the spaces we have now, to change the things we can at this moment, and move at the speed of trust, as some of my elders would say, and move things in the ways they can be moved, regardless of who's in office.

Mike Barcik: Yep, yep — and again, there are a lot of wins here, by implementing this at a lot of different levels. One thing is that, frankly, energy efficiency rarely has extreme controversy —

most people, regardless of political affiliation, see the value of using resources wisely. It doesn't always mean we practice what we preach, but a lot of times the market says, we see the value of that, and we go ahead and do it anyway, regardless of whether there are incentives or not. But in a great sense of equity, I think being part of that is what I'm particularly excited about for these incentives — there are incentives literally every person in the state of Georgia can benefit from, and many of these are in effect right now, today. But there are future incentives coming very soon that we're particularly excited about, because I think they're going to help a lot of people, particularly underserved communities.

Eriqah Vincent: Wonderful, awesome. So we talked a bit about Drawdown Georgia, but I want to make sure I highlight that you coauthored Drawdown Georgia's Home Energy Efficiency Toolkit — I've looked at some of these toolkits on Drawdown Georgia's website, and I encourage folks to take advantage of those free resources. Tell us a bit about that kit, and why Georgians should take a look at it.

Mike Barcik: Well, let me just say — I don't care if you're motivated by fighting climate change, improving your home's comfort, concern for your family's health, or simply because you don't like to waste money on unnecessarily high utility bills, making buildings better just has benefits galore. Honestly, the opportunity to author the Drawdown content was an honor and a privilege, and I'm happy, because I think it means Southface can help steer you to make good decisions about how to approach your upgrades. Whether you're a serious DIY person, like I kind of am, or you want to hire a professional to help you, I think this guidance is for you.

Eriqah Vincent: Wonderful. What's one thing you want Georgians to know about the benefits of investing in energy efficiency upgrades in their homes?

Mike Barcik: Well, we have this saying that houses are systems, buildings are systems, and I just want to say, be careful of shiny things — let me explain that. I don't think we're going to succeed by reverting to a single flashy technology, something like spray foam or solar panels. Don't get me wrong, I love both of those technologies, I love renewable energy, we should have more incentives to install it on our buildings and rooftops. But if you just add solar panels to a pretty lackluster and inefficient building, it's not going to fix the drafts, it's not going to fix the bad comfort and health, it's not going to fix drainage issues, lack of ventilation, leaky ductwork, all this kind of stuff. And, you know, I'm from Georgia, so we might say, don't put lipstick on a pig — I don't know if that translates for someone from New Jersey, but I'd summarize it as: my mantra is, number one, fix the building — fix the envelope, improve the ductwork, usually things like sealing and improving insulation. The second thing you do is upgrade the equipment, and this is where we take advantage of the improvements we made — we want to make sure our new equipment is sized correctly, because we've reduced the loads on the building, so our new equipment can be smaller, and smaller is less expensive, and will probably work better, and certainly costs less to operate. So don't always assume — I've definitely seen examples of people making upgrades and just putting like-for-like in, and you're missing out. Also, look at this as a great opportunity to switch to clean and efficient electric appliances, so we're not producing fossil fuel emissions at houses anymore, that's the direction we're trying to move toward. And then, third, take advantage of these amazing tax credits and utility rebates that are in existence right now, and then I'd definitely say look at renewables — they really are affordable and viable.

I have a small solar array on my roof, and my last two power bills were \$16 and \$26, so that's a nice thing, to feel like I'm future-proofing myself — a year ago it was even less, but now we're

paying for a nuclear power plant. I always like to say utility bills can do three things — they can stay the same, they can go down, but what are they probably going to do? They're probably going to go up. So the investment in making your home more comfortable, more healthy, all this stuff, it's future-proofing you, and that's really important. And then we also talk about climate resilience, another big thing — what happens if your power goes out, and your home isn't well insulated? By having a good, efficient building, you're able to survive that a lot longer, and a lot more comfortably. So I think there are a lot of benefits there.

Eriqah Vincent: Yeah, fantastic. I've been looking at the energy kit a little, I'm going to keep looking at it for my own house, because I certainly know there are upgrades we can make around here, so I'm really appreciative of you talking about some of those.

Mike Barcik: Well, I live in a 1920 craftsman bungalow, and it was leaky as a sieve — we've done a lot to it, we've been in our house 25 years now, and I can definitely say my utility bills are significantly lower than when we first moved in. And our consumption — because I'm a nerd, I've been tracking this, I've got the numbers to back it up, but I really do believe it. And I try to walk the talk, and if I recommend a technology or a strategy, I like to experiment on my own home first — and it's really great, I love this stuff, I love the work we do, it just gets me excited, and I love to take something that's not so great and make it better, I think that's a big part of all this.

Eriqah Vincent: Absolutely. More broadly, why should Georgians consider improving the energy efficiency of their homes? I think you touched on that a bit, but if you want to, as we're closing out —

Mike Barcik: Yeah, no, that's great — I guess I want to reiterate that the benefits are really long-lasting, and you can almost look at it as, we're investing in the housing infrastructure of the state of Georgia — this is legacy stuff we can pass down. Again, we're going to reduce the building load, make sure everything is working efficiently, without emitting fossil fuel emissions, and then the next step is for us to green up our supply of electricity, which is happening. And, again, the gains are many — it's cost, comfort, health, durability, resilience, and this also helps overall with our electrical grid too. So we can really recognize a lot of benefits at a lot of different scales.

Eriqah Vincent: Perfect. Last question, Mike, this is kind of our meta question — what is giving you hope around climate solutions in the state of Georgia, your home state?

Mike Barcik: Well, I think you've got to stay positive — I'm not saying I don't accept the disappointments that come along, but I do see some neat things in our sector that really excite me. There's a movement now I'm seeing that's really growing in the state of Georgia, where we're constructing what are called mass timber commercial buildings — these are commercial buildings, sometimes many stories high, 20, 25 stories, instead of using the usual concrete and steel, which is extremely energy- and carbon-intensive — those are great products, but we've got to face the reality of the baggage that comes with these materials when they show up on our job site, the footprint is pretty significant. But the idea of using wood, which actually sequesters carbon, is really on the rise, and Drawdown actually recently reported on it — we recently saw the opening of a mass timber building near the BeltLine, next to Ponce City Market, made entirely of trees that were actually harvested in Georgia, and fabricated nearby. And we have some amazing companies that manufacture really advanced building products — companies that make insulation from recycled content — and all this is happening right here in the state of Georgia, so I find that really exciting.

And then, on a larger scale, what's also kind of neat is all these technological advances that have occurred — the word that pops up all the time is "heat pump." We can really take an all-electric home and use a heat pump for very efficient space heating and cooling, we can use a technology called a heat pump water heater for extremely efficient hot water. We've got induction cooking, which is very safe — that's another big thing, particularly gas cooking has real safety concerns. We have electric vehicle charging, we have rooftop solar — we have all the technologies we need to live a net-zero life, we have it, it exists, we don't have to invent anything, and it'll continue to be improved and made better over time, but we have all this now, we just have to implement it.

Eriqah Vincent: Absolutely, absolutely — implement it, and allow access for people to access it too, doing both hand in hand is going to be really important.

Mike Barcik: Very much so.

Eriqah Vincent: Thank you so much, Mike, this was really, really informative and eye-opening for me, and I hope it was for our audience too. Thank you all so much for joining us. Thank you again, Mike, everybody have a great day.

Mike Barcik: Thanks, Eriqah.