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PRESENTATION

Operator

Good day, everyone, and welcome to the Crown Castle Q2 2020 Earnings Call. Today's conference is being recorded. And at this time, I'd like to turn the conference over to Ben Lowe. Please go ahead.

Benjamin Raymond Lowe *Crown Castle International Corp. (REIT) - VP of Corporate Finance & Treasurer*

Thank you, Vicki, and good morning, everyone. Thank you for joining us today as we review our second quarter 2020 results. With me on the call this morning are Jay Brown, Crown Castle's Chief Executive Officer; and Dan Schlanger, Crown Castle's Chief Financial Officer.

To aid the discussion, we have posted supplemental materials in the Investors section of our website at crownccastle.com, which we will refer to throughout the call this morning.

This conference call will contain forward-looking statements and discussions of hypothetical scenarios, which are subject to certain risks, uncertainties and assumptions, and actual results may vary materially from those projected or presented during this call. Information about potential factors which could affect our results is available in the press release and the Risk Factors sections of the company's SEC filings. Our statements are made as of today, July 30, 2020, and we assume no obligation to update any forward-looking statements.

In addition, today's call includes discussions of certain non-GAAP financial measures. Tables reconciling these non-GAAP financial measures are available in the supplemental information package in the Investors section of the company's website at crownccastle.com.

So with that, let me turn the call over to Jay.

Jay A. Brown *Crown Castle International Corp. (REIT) - President, CEO & Director*

Thanks, Ben, and thank you, everyone, for joining us on the call this morning. As you saw from our results, we delivered another quarter of positive results that were in line with our expectations. And we maintained our guidance for 2020 growth and AFFO per share of 7% to 8%, consistent with our long-term growth expectations. I believe our strategy and unmatched portfolio of more than 40,000 towers and approximately 80,000 route miles of fiber, concentrated in the top U.S. markets, have positioned Crown Castle to generate growth in cash flows and dividends per share, both in the near term and for years to come.

Following an industry slowdown in tower activity late last year, we were seeing activity on towers begin to increase, and we continue to anticipate a significant step-up in industry activity in the second half of this year as our carrier customers invest to improve their existing networks and as 5G starts to ramp. While the full rebound in activity on towers is occurring a little bit slower than we've previously



expected, we remain on track to generate at least 7% growth in AFFO per share and see potential for our AFFO per share growth to be above our expected 7% to 8% target going into next year. Dan will discuss the results and our expectations for the balance of 2020 in a bit more detail. So I want to focus my comments this morning on our strategy to maximize long-term shareholder value while delivering attractive short-term returns.

As many of you know, shareholder engagement has always been a priority as we continue to execute on our strategy. Over the last several weeks, we have engaged in productive conversations with many of our shareholders, and I very much appreciate the feedback we received and the thoughtful exchange of ideas during those discussions. Through those interactions, we heard broad support for our overall strategy, including our continued investment in towers, small cells and fiber and our overall approach to capital allocation and our dividend policy. We also heard that you, as owners of the business, are looking for more visibility into how our strategy is performing. And with that in mind, we've taken steps this quarter to increase the disclosure around our small cells and fiber strategy. We look forward to hearing your feedback about the additional information provided and welcome ideas for other disclosure we should consider going forward.

Turning to our strategy to maximize long-term shareholder value, we believe we have positioned the company with the right assets in the right markets with leading capabilities to deliver value to our customers and generate shareholder returns for years to come.

Focusing on Slide 3, we have invested nearly \$40 billion in shared infrastructure assets that we believe are mission-critical for today's wireless network and sit in front of what is expected to be a massive decade-long investment by our customers to create the next generation of wireless networks.

As you can see, our tower and fiber investments are at 2 different stages of development and maturity. Our tower investment began more than 20 years ago when we built and acquired assets that we could share across multiple customers, providing a lower cost to each customer while generating compelling returns for our shareholders over time as we leased up those assets. As we have proven out the value proposition for our customers over time, we have leased up our tower assets, so they now generate a yield on invested capital of approximately 10%. More recently, we realized that wireless network architecture would need to evolve with 4G, requiring a network of cell sites that would be much denser and closer to the end users. With that in mind, we expanded our shared infrastructure offering beyond towers by building the industry-leading small cell business in the U.S.

Because small cells really developed during the 4G investment cycle, we are much earlier on when it comes to our small cell and fiber investments, with approximately 90% of the approximately \$14 billion of invested capital having been deployed in the last 5 years. Given the immaturity of these investments, it's encouraging that the business is already generating a current yield on invested capital of more than 7%. As you can see on Slide 4, the extension of our strategy into small cells was based on how similar the 2 business models are. Both small cells and towers have the same underlying demand driver of wireless data growth and the same core customers. They both have a high initial cost that is ultimately shared across multiple customers that lowers the capital and ongoing operating costs to those customers while generating returns for shareholders through the long-term lease up of those assets. They both have 10-year initial contract terms with escalators that meet or exceed annual churn rates, and they have similar barriers to entry.

On the tower side, the strategy has created significant value for shareholders and still has a long runway of growth as we believe towers remain the most cost-effective way to deploy spectrum, making them critical to next-generation wireless networks.

As you can see on Slide 5, the returns and ultimate value realization for towers has taken decades to play out. We started with initial returns in towers of approximately 3% and grew those yields to nearly 9% over 6 years as we increased the tenancy and cash flows on a largely static asset base. We then had the opportunity to double down on our investment strategy, which diluted the overall yields to approximately 7% as we added less mature assets to the portfolio, and it took us another 5 years to get back to the more than 9% yield. As the business model and strategy continue to prove out, we decided to double down again with the T-Mobile and AT&T tower acquisitions, once again diluting the consolidated yield as we nearly doubled our tower asset base by adding less mature assets that came with a lower initial return. Once again, it took us about 6 years to return to 9% yields on the overall portfolio. In all, it has taken us 20 years to move our returns from 3% to the 10% levels we see today.



As I reflect on my 20-plus years here at Crown Castle, having lived through this journey with our shareholders, there are several important observations when I look at this slide. First, what is largely taken for granted today by most investors that the U.S. tower business is one of the best business models ever was not a widely held view in the earlier years of development. Even as we were proving out the business by adding several hundred basis points of yield to the early investments, I can remember answering questions about the long-term return potential of the business, the negative free cash flow profile and when or if we would -- that would inflect and the potential negative impact of carrier consolidation, just to name a few.

Second, the increase in yields occurred over a long period of time and only when we maintained a static asset base. However, if at any point, we had stopped investing in new assets to focus on driving the yields up, we would have missed out on significant value creation. Although similar to our tower investment profile, we expect small cells will have a different yield progression, since we are making organic investments to construct less mature small cell assets as opposed to purchasing tower assets, which should result in a more gradual increase in returns as opposed to the large ups and downs you see on this page related to towers. And third, a significant portion of the ultimate value realization from towers came much later once there was little to no remaining debate in the market about how good the U.S. tower business actually is. The significant multiple expansion seen on this slide is a good indication of how that debate was ultimately decided over a long period of time.

Turning to our small cell and fiber strategy. We are generating a 7% yield on approximately \$14 billion of invested capital today. We have legged into our small cell and fiber investment over the last decade concentrated, as I mentioned before, in the last 5 years as our conviction in the value creation opportunity increase, including seeing returns on early investments increase as we co-locate new small cell customers on existing fiber assets. As I mentioned earlier, we expect the yield on invested capital and fiber to have a more gradual increase over time relative to what we've experienced with towers as we make additional organic investments in new small cell and fiber assets.

To give additional visibility into how our organic investments are progressing, on Slide 6, we've identified 5 markets that we will discuss today in greater detail and we'll update on an annual basis during our second quarter call. These 5 markets should provide a helpful representation of how our overall strategy is performing over time, given how different these markets are when it comes to the scale of the investment, the revenue mix between small cells and fiber solutions, the node density and the contribution from acquisitions. Let me make a few observations within these markets I would like to draw to your attention.

Los Angeles provides an important proof point that increases our confidence that our strategy is working. More than 70% of the invested capital is associated with several acquisitions, including NextG, Sunesys and Wilcon, at an initial return of less than 6%. Since that time, we have added more than 200 basis points of yield to the overall invested capital base by adding customers and cash flow to the nearly 7,000 route miles of fiber, with most of the growth coming from adding small cell customers.

The returns in Philadelphia are also encouraging, with a current yield of approximately 10% as a result of combining fiber solutions and small cells on the same assets, which gives us a great opportunity to meaningfully increase returns as we continue to add small cells to the fiber over time. Although the nodes per mile is the highest in Denver, the majority of the investment in activity to date has been for anchor small cell customers. The 5.5% yield is lower than we would typically expect from small cell anchor builds due to some higher costs that we incurred during construction, which were beyond what we had initially estimated.

Looking at Phoenix, the nearly 12% return is higher than we would typically expect with a node density of just 2 nodes per mile, which is primarily driven by a combination of some co-location that has occurred in the market as well as the contribution from small cell venues.

And to the last market on the page, we believe Orlando is a key market to review. The very first investment we made around our small cell strategy was in Orlando more than a decade ago. We built this initial system for 1 carrier, and we're able to subsequently lease it up to other carriers over time. This initial system has also benefited from both amendments and increased density for evolving technologies. We think Orlando provides a clear example of what a fully leased-up or stabilized market can look like. The capital we invested now yields nearly 20%, which is where we believe all markets can get with the level of lease up we think is possible in the future.

Again, we think it will be helpful for you to see how these markets develop over time. So we plan to revisit these same markets each year



to give you visibility into how their returns and operating performance evolve. Some of these markets will likely show yields increasing over time as we co-locate additional nodes on existing fiber, while others may show decreasing yields for a period of time as we expand our fiber footprint, mainly growing outside of the urban cores to cover the entire market where small cells may be.

Zooming back out, we believe our small cell and fiber strategy provides a compelling risk reward opportunity for our shareholders. As you can see on Slide 7, with 30% to 40% anticipated annual growth in data demand from current 4G applications and the additional demand that we expect to be generated by the deployment of 5G networks, we believe the long-term addressable market for small cells will be very significant. Based on industry estimates, the total number of small cells on air in the U.S. could be over 1 million by 2024. And we don't think it stops there. As a reminder, our base case underwriting has always assumed we add 1 additional tenant equivalent at 4G densities of approximately 2 to 3 nodes per mile over a 10-year period. And we believe 5G has the potential to drive network densities well beyond our underwriting assumptions. Considering the combination of 5G network requirements and the higher spectrum bands that will be available to meet future mobile demand, we believe node densities approaching 20 nodes per mile could represent an achievable upside scenario longer term.

Slide 8 helps to illustrate just how compelling the risk reward opportunity could be for our small cell strategy, all other factors being held constant. The purple line on this graph is an illustrative representation of possible total shareholder value in 10 years, with the only major change in the assumptions being no densities increasing as you move from left to right on the chart. The light green shaded area on the chart illustrates where we could be on that curve if we sustain the current growth profile of the business, which we believe we can achieve based on 4G densities. We believe the value for shareholders could potentially be 2x higher based on these assumptions.

As small cell densities increase moving left to right, you can see our -- the potential our small cell strategy could result in the value for shareholders being 4x higher in 10 years, even with only 7 nodes per mile on average. As we just went over, we believe ultimate 5G densities could be significantly higher than that, potentially approaching upwards of 20 nodes per mile over the long term.

Going the other direction, if the current volume and mix of small cell co-location activity do not increase from current levels and fiber solutions growth were to decelerate, we believe the potential downside is fairly muted, as shown on the graph, when compared to the potential upside. Similar to when we made our first investments in tower assets, nobody can predict exactly how these things are going to play out over the next 2 decades. In any case, though, we believe that having the right shared communication infrastructure assets in the midst of significant wireless data growth that is driving network investment can lead to tremendous yields on invested capital. With small cells being that kind of infrastructure asset, we are excited when we assess the potential upside in proportion to the potential downside. We see limited risk and huge potential reward, which increases our conviction that this is the right strategy to pursue.

So to wrap up, we believe that our strategy to maximize long-term shareholder value is compelling and straightforward. We are 100% levered to the largest and best market in the world for owning communications infrastructure assets. We are positioned to enable and benefit from the wave of investment our customers are expected to make over the next decade to build out 5G and meet the growing demand for wireless data. We are investing for the future. While delivering a compelling near to medium-term total return with a high-quality dividend, we expect to grow 7% to 8% per year, and we believe our strategy offers shareholders significantly potential more upside than downside.

And with that, I'll turn the call over to Dan.

Daniel K. Schlanger *Crown Castle International Corp. (REIT) - Executive VP & CFO*

Thanks, Jay, and good morning, everyone. We delivered another quarter of positive results that were in line with our expectations, reflect the resilience of our business during this period of unprecedented uncertainty in the broader economy. We are seeing activity on towers begin to increase, and we continue to anticipate a significant step-up in industry activity in the second half of this year, as our carrier customers invest to improve their existing networks and as 5G investments start to ramp. However, the full rebound in activity on towers is occurring a bit slower than we previously expected, which could impact our expected service margin contribution during the remainder of 2020. Despite the potential for some tower activity to occur later in the year or even potentially flip into 2021, we remain on track to generate at least 7% growth in AFFO per share this year. Because we see the situation as a delay and not a reduction in activity, we believe there is the potential that AFFO per share growth will improve and be above our 7% to 8% per year growth target as we move

into next year.

Turning to Slide 9 of the earnings presentation. We experienced another quarter of strong top line results that included 5.6% growth in the organic contribution to site rental revenues, driven by 9.4% growth from new leasing activity and contracted tenant escalations, net of approximately 3.8% from tenant nonrenewals. The revenue growth was offset by lower services contribution compared to the same period last year, resulting in more modest growth in adjusted EBITDA and AFFO per share. The lower services contribution was in line with our expectations and tied to the slowdown in tower activity that began in the fourth quarter of last year and carried through the first half of this year.

As I mentioned, we anticipate a significant increase in industry activity in the second half of this year as all our carrier customers invest to improve their existing networks and as 5G investments begin to ramp.

Turning to Page 10. We are maintaining our full year outlook for 2020. At the midpoint, this represents approximately 5% growth in site rental revenue, 6% growth in adjusted EBITDA and 9% growth in AFFO year-over-year compared to 2019 and includes approximately 6% growth year-over-year in organic contribution to site rental revenues.

Focusing on investment activities. During the second quarter, capital expenditures totaled \$414 million, including \$24 million of sustaining expenditures and \$383 million of discretionary capital investments across fiber, towers and small cells. Additionally, we returned significant capital to our shareholders during the first quarter, with our quarterly common stock dividend totaling approximately \$500 million or \$1.20 per share, representing growth of approximately 7% on a per share basis compared to the same period a year ago.

We were active on the financing front during the quarter, meaningfully improving our financial flexibility by opportunistically raising \$3.75 billion in senior unsecured notes across 2 separate offerings, with a weighted average maturity in coupon of approximately 17 years and 2.8% to refinance existing debt. Following those refinancing transactions, we have nearly \$5 billion of undrawn capacity on our revolving credit facility and no meaningful maturities until 2022.

In addition, we finished the quarter at 5.6x debt to adjusted EBITDA. We remain committed to our investment-grade credit rating and anticipate a glide path back to our target leverage of approximately 5x by the end of 2020 based on the expected EBITDA growth through the year.

Finally, I wanted to make sure you saw that we included some additional disclosures in our segment reporting in our press release and in the supplemental earnings materials we posted to our website. During the recent shareholder engagement Jay mentioned earlier, we received feedback that it would be helpful if we provided more visibility into the composition of our fiber segment. With that in mind, starting this quarter and going forward, we are providing a breakdown of our fiber segment revenues between small cells and fiber solutions as well as additional details around the composition of revenue within the fiber solutions business line. As you can see for this quarter, our fiber solutions business grew 3% over the same quarter in 2019, and our small cell business grew 17%, both in line with our expectations. We have also provided return metrics, both by segment and for the consolidated business in our supplemental earnings materials. We hope this additional disclosure aids in your ability to analyze our business going forward.

So to wrap up, our second quarter results were in line with our expectations, and we believe we remain well positioned to generate at least 7% growth in AFFO per share in 2020, with the potential for growth to improve next year. Looking further out, we believe our ability to offer towers, small cells and fiber solutions, which are all integral components of communications networks, provides us the best opportunity to generate significant growth while delivering high returns for our shareholders.

With that, let me turn the call back over to Jay.

Jay A. Brown Crown Castle International Corp. (REIT) - President, CEO & Director

Well, before we take questions, I wanted to speak to the separate press release we issued yesterday. We heard your desire for us to enhance our corporate governance and have outlined the enhancements our Board is making on this front, including instituting a mandatory Board retirement policy. Specifically, the Board began a process 2 years ago focused on near-term refreshment to advance its

objective of adding highly qualified independent, diverse individuals with relevant experience and expertise to oversee our strategic execution and continued value creation. The Board has determined to phase in the implementation of the mandatory retirement policy to provide a transition period for the 5 current Crown Castle directors who are over the age of 72. This phased implementation will result in 3 of our current directors not being renominated for election in May 2021 and an additional 2 current directors not being renominated for election in May 2022 at our annual meetings of shareholders. The collective advice, oversight and wisdom of these directors have been significant drivers in the creation of Crown Castle's unmatched portfolio of towers, small cells and fiber.

On a personal level, I'm grateful to these directors for their mentorship, their support and their friendship throughout my career here at Crown Castle. There is no way we could have executed on our strategy that has created so much shareholder value over the last 20 years without their leadership. On behalf of all of our shareholders, I'd like to thank them for their tireless work in helping to create what Crown Castle is today. The Board has hired a leading search firm to assist with its search for independent directors who bring the right mix of skills, diversity and relevant experience to help our Board further drive sustained value creation.

Also, as noted in the press release, the Board is committed to reviewing the company's executive compensation program to ensure it continues to align with the interest of all our shareholders and industry best practices. We are certainly grateful for the feedback our shareholders have provided for us on our corporate governance and believe these actions demonstrate our Board's desire to be responsive to that feedback.

And with that, Vicki, I'd like to open the call for questions.

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) And we will take our first question today from Simon Flannery with Morgan Stanley.

Simon William Flannery *Morgan Stanley, Research Division - MD*

And thanks for all the additional disclosure. Two, if I may. One on fiber solutions. Could you just talk about the activity in the business? It looks like still growing around that 3%. Any impacts you're seeing from COVID?

And then on the return point on the small cell. Perhaps it would be helpful if you could just go through your capital budgeting process and how you think about setting your CapEx plans and your return hurdles just to put that through the filter to get those sort of long-term targets? Any sense on that process would be great.

Jay A. Brown *Crown Castle International Corp. (REIT) - President, CEO & Director*

Sure, Simon. On your first question around the fiber business, similar to what we talked about last quarter. As you can see from the disclosure, the majority of our customers are carriers and large enterprise, specifically in the financial, health care and education sectors. So we have seen very little to no impact from COVID in the business there. It hasn't impacted either the gross revenue growth or churn. So things have basically come in where we expected them to. In total, in the business, less than 5% of the revenues are coming from small or medium businesses. There are -- as I mentioned last quarter, we have had some customers request the delay in installation of new services that they've limited access to their facilities. But that hasn't really had any material impact. So there's no change to our overall guidance, no change to the revenue growth or churn profiles there on the fiber side.

In terms of our return process, how we go about allocating capital internally, we have a really rigorous process that we go through for each of the investments that we make. And some of the materials that we're laying out here this morning of showing co-location and returns over time are things that we've looked at historically to evaluate different markets and how carrier behavior looks. And given, obviously, the nature of the business, because we're putting up a significant amount of initial capital, one of the things that's most important to that evaluation is what do we think the future demand for the asset will be. So as we noted on the fourth page there, you can see the returns initially when we go and build an initial system, generally, we're investing that capital somewhere in the neighborhood of about a 6% to 7% initial yield on invested capital. So the first thing we look at is are the terms in line with that expectation. And then it really comes down to an evaluation of what we think the future growth around those assets will be.



As you've heard us talk about, we're primarily focused in the top markets in the U.S. We think that is where the preponderance of the capital will go, both our capital as well as the carrier investment, as the networks densify and move towards 5G. And we think that sets us up for -- long term sets us up for terrific returns in the business in order to deliver great returns for shareholders. So it's a combination of making sure we get the terms right out of the gate financially and then assessing what we think the future lease-up is going to be.

And last thing I would just say on this point. We're in this business because we think it generates a lot of returns for shareholders over a long period of time. And there are plenty of RFPs in the market that so far, and I think this will continue to be the case, where we decide not to participate because either we think the economics aren't appropriate out of the gate, where we think the potential for lease-up and long-term economics just don't make sense and don't make the business look like a tower business ultimately. So that's the framework through which we're evaluating our capital investments and plan to continue on that path.

Operator

Next is David Barden with Bank of America.

David William Barden *BofA Merrill Lynch, Research Division - MD*

So Dan, I guess the first one is on the guidance. Looking at the first half versus the second half, the math implies a pretty substantial acceleration in EBITDA, just to get to the low end, let's just say, roughly 7% sequentially accelerated from the 2% we saw in 1Q. And then when you look at what that math implies, you kind of land it around [9.45%] or so for the fourth quarter EBITDA that we annualize that over the low end, and all of a sudden, growth is accelerating to the 9% level in 2021. So could you kind of help us understand kind of where that conviction that you can kind of see this acceleration comes from? That's the first question.

And then I guess the second question, Jay, thank you again, I think that everyone's going to welcome the additional disclosures here. You've kind of historically talked about carrier self-perform as the biggest competitor in the marketplace. Could you talk about how, as you think about the pan as carriers are building out their own facilities in markets, that kind of erodes the opportunity to get colocation in those markets. So how big is this opportunity for you as you think about it from a capital budgeting standpoint?

Daniel K. Schlanger *Crown Castle International Corp. (REIT) - Executive VP & CFO*

Sure. I'll take the first question. Thanks, David. On the guidance, as you pointed out, there is a significant ramp from the first half to second half. And we've been talking about that since we gave our outlook and certainly said that when we were talking through the first quarter. We have seen an increase in activity, as we indicated, as Jay and I talked about in our prepared remarks. And we think that it is leading to what we see as a significant ramp in activity and ultimately, our cash flows and EBITDA generation going into the second half. But as you pointed out, it is a pretty big ramp. We've seen the beginnings of all of those activity and those applications coming in. But as we talked about, they pushed out a little bit from what we expected. So we do think that we'll likely be on the lower end of our guidance. But what it does show and what we were alluding to a few times, too, was that if that comes to be and filters through the way we expect it to, that we see a lot of that momentum going into 2021. And when we give our guidance next quarter, we'll confirm what we think that will ultimately be and how that will play out and what it will look like going forward, but we think there's a chance that it is going to be above our 7% to 8% longer-term growth rate target. So we feel good about the activity levels around the business right now, even if they are just happening a little bit later than what we would have expected when we started and gave guidance in October.

Jay A. Brown *Crown Castle International Corp. (REIT) - President, CEO & Director*

On your second question, Dave, around the carrier self-perform and the impacts to the business, first thing I think I would start with is just sort of fundamental to the product offering that we have to the carriers. We're providing a low-cost solution to the carriers. And as has been proven out with towers over a long period of time, the carriers are thoughtful about how to lower their overall cost of network. And they have moved to a shared solution on the tower side because that's the lowest cost for deploying the network. We believe the exact same thing is going to happen with small cells. In fact, the solution that we're offering to carriers is basically 50% reduction in their overall costs over time as them owning it themselves. And over time, they've proven to be thoughtful allocators and diligent around costs, and we think they'll come to us as a result of being able to save meaningfully on the network deployment side.

That also means, though, that we're not going to do it all. And so when I look at the carriers self-perform and the comments that they've

made about their need to deploy and build their own small cells, the reality is we will not be able to offer or have an interest in offering a shared solution everywhere in the U.S. that small cells are needed. Our strategy has been pretty clear from the beginning that we're focused on the top markets in the U.S. and dense urban and suburban areas, where we think there's going to be significant co-location over time. And that doesn't mean we're going to build fiber everywhere for the carriers. So there are going to be places where they need to build it in order to provide to us, as consumers, a ubiquitous solution.

As I look at the total addressable market where our fiber is going, I believe we're in a sweet spot thereof. We're likely putting this capital based on what we believe will happen over a long period of time in the places that are going to have a disproportionate amount of future demand for small cells. So as we've shown in the fiber markets laid out on the page there, so far, we've been able to allocate that capital into places where there is -- has been future colocation, and we think there will be plenty of addressable market in the future to continue to drive those returns and achieve really attractive outcomes for shareholders.

On the last point around capital budget, one of the benefits of this business is you get long visibility. Whenever we commit to customers that we're going to go out and build nodes for them, there's about a 2- to 3-year build cycle. And so you can look at the nodes that we have in process as a proxy for what capital deployment is going to be for the next 2 to 3 years, because we've made those commitments to customers at that point once we've signed up the nodes.

So one way, and we talk about this every quarter of kind of the total pipeline, and Dan walked through it in his comments, if that pipeline starts to change, then there could be a point where it goes up or down relative to overall demand. But that gives you quite a bit of lead time in terms of what we think capital spending is going to look like.

Operator

Our next question will come from Phil Cusick with JPMorgan.

Philip A. Cusick *JPMorgan Chase & Co, Research Division - MD and Senior Analyst*

Can we just dig a little bit into that slower ramping activity? Is there any of this, do you think, due to COVID at the municipal level? Or is this more carrier demand not getting started as quickly as you expected? And has there been any inflection there as we've come into July?

And then second, Jay, if we can go back to that 1 million small cells like 2024 that you mentioned. Remind me where you are now and what the pace of carrier conversations look like? You haven't announced a major new small cell award in quite a while. And given the long build cycle, I don't know how we get to a -- that big of a number by 2024 without a pretty big ramp near term?

Jay A. Brown *Crown Castle International Corp. (REIT) - President, CEO & Director*

Yes. On the first question, I think we've talked about this going all the way back to October of last year when we first gave the guidance. It's very difficult to be super precise as to when inflection points and activity happen in the business. And given that this is a recurring business, once we sign up the lease, it stays for a very long period of time. It becomes less important to be -- to figure out exactly which quarter a certain lease ends up in. And I would describe the activity and the pushout as nothing other than slightly different than what we anticipated when we gave the guidance in October of 2019. But in terms of overall activity and what the carriers are focused on, and I think this is reflective of the statements that they've made -- they've been making publicly, we see no change in behavior activity long term that has any meaningful impact into our long-term growth rates around towers or small cells. So we think it's purely just timing.

And as Dan mentioned in his comments, where that is most pronounced in our numbers is not really in the recurring components of the business, but in the services component of the business, where we do some preconstruction work for the carriers. And depending on when that hits, if it slides into 2021, then obviously, we don't get the benefit this year. So more so around that preconstruction work on the services side and no real change in activity from the -- from our expectations of what the carriers will do, just a slight change in timing.

On your second question around the awards of small cells. Our experience has been over time that the carriers award small cell nodes in large bulks. And this is very different than kind of the tower historical experience where towers are leased 1 single tower at a time. And



it's very rare in the tower business to have an entire market deployed at one time. But because of the nature of small cells being integrated and connected with fiber, they tend to look at either entire markets or large sections of a market, and we've won awards on that basis. So -- and we've continued to win awards and the total number of nodes has continued to go up, but we haven't signed any major ones in the last couple of quarters. We don't view that as a change in the business. We think it's just reflective of kind of the natural timing and ebb and flow that we'll see over time. So I don't -- I think we will continue to see some lumpiness in that, and the tower business may be a little steadier in terms of the way leases are signed, but there's just a little bit of difference in terms of how the carriers think about those network deployments.

Philip A. Cusick *JPMorgan Chase & Co, Research Division - MD and Senior Analyst*

Yes. It's just that 1 million in 4 years is a pretty big delta from what are several hundred thousand industry today. It sounds like there may be conversations about future rewards happening at least, if not those awards coming anytime soon?

Jay A. Brown *Crown Castle International Corp. (REIT) - President, CEO & Director*

Well, I think there is no question that from the comments that we're making as well as industry estimates as well as what the carriers are thinking that we believe we're right on the doorstep of a significant increase in this activity over the coming years. And I think all of the industry estimates would suggest that, that ramp is coming significantly. I think there's probably some debate today as to how many actual small cells there are on air. So the math there would put the total small cells on air north of 200,000 today, but growing to 1 million over 5 years, which indicates that we're sort of right at the early stage of seeing significant increases over the next coming years.

Operator

We'll go to Rick Prentiss with Raymond James.

Richard Hamilton Prentiss *Raymond James & Associates, Inc., Research Division - Head of Telecommunication Services Equity Research*

I want to, again, echo, thanks for the fiber versus small cell revenue split. We would love to get the third quarter '19 and fourth quarter '19 numbers before they actually get reported out in 2020, that would help us. But as you think about disclosure, some of the shareholder comments out there had also been what about breaking out maybe a little more disclosure on KPIs, such as new lease activity, escalators and churn. Do you envision providing those breakdowns at the segment level, fiber solutions, small cell. Tower versus just aggregate?

Daniel K. Schlanger *Crown Castle International Corp. (REIT) - Executive VP & CFO*

Yes. Rick, I think what you saw us do is take what we think was a meaningful step in trying to add disclosure to how our strategy is playing out over time. And you can see that what we've given in terms of the revenue of fiber solutions versus small cells versus towers, you can line up to get to what the net growth rates are in each of those businesses. And as we discussed, they're right in line with what we told people had expected. And what we're trying to do is provide a long-term view of how this business will play out and what to look at over time and how we think about it. And the way we think about it is really in this type of the market analysis that we went through. And it won't move on a quarter-to-quarter basis. That's why we're going to update it annually to show you kind of what we think is a reasonable estimate or a reasonable expectation of how these things can move over time. It will be very difficult to try to do that on a quarter-to-quarter basis. So what we've done at this point, we believe, gives really good insight into the business and how it is playing out and how we think about it. And we think that, that hopefully is sufficient. To the extent that there are other things that investors would like to see, we would absolutely take that feedback and take it into consideration and think through it about whether we want to do that going forward.

Richard Hamilton Prentiss *Raymond James & Associates, Inc., Research Division - Head of Telecommunication Services Equity Research*

Okay. How about -- can you update us as far as how many nodes are on air or in backlog or what that total is? Jay, you mentioned there's been a couple of nodes, but not many, but it certainly helps if we also know kind of what's happening with the nodes.

Daniel K. Schlanger Crown Castle International Corp. (REIT) - Executive VP & CFO

Sure. We're at a little over 45,000 nodes on air and around 25,000 nodes in the pipeline. So overall, a little more than 70,000 nodes on air in the pipeline. That's not significantly changed from last quarter. So like we mentioned, we haven't made significant bookings in the quarter, but we did put some on it.

Richard Hamilton Prentiss Raymond James & Associates, Inc., Research Division - Head of Telecommunication Services Equity Research

Makes sense. And then, Jay, I think your comment is exactly right to feel about maybe small cells are more lumpy or I'd even call it chunky versus towers is more consistent. As we think about the next couple of years from the carriers, could there be a little more shifting to macro tower versus small cells as we see T-Mobile focus on the merger integration of Sprint, the C-band auction comes out and maybe companies like Verizon might want to participate. So the -- I would think one of the other lumpy, chunky aspects could be where carrier CapEx is getting focused on any given year or 2 over a 10-year period. Is that fair?

Jay A. Brown Crown Castle International Corp. (REIT) - President, CEO & Director

Yes, I think that's possible. There will be some movement there. I think what we'll see as we move into both the end here of 4G densities and into 5G, I think you're going to see a mix of what we've seen historically with the migration from 1G to 2G, 2 to 3 and 3 to 4. Across the tower portfolio, I think you're going to see the carriers go through and add the 5G technologies. A lot of that will incur on existing sites. As they think about how to densify the network, we think disproportionately on the densification side, they're going to need to use small cells in order to get to that densification. So I think each carrier and by market will be making judgments around kind of the increased or upgrading of their network to 5G and using the existing assets to do so, as well as the mix of the necessity to improve and increase the density of the network, and that probably goes towards small cells. I think that we will see some continued lumpiness on that front. I also think that it will not be kind of across the nation the same answer. So as we look at it on a market-by-market basis depending on the spectrum bands that they have, the capacity inside of those spectrum bands and what they're trying to accomplish, I think we'll see some pretty significant variation market-by-market as to whether or not the share of wallet is going towards macro sites or small cells.

Daniel K. Schlanger Crown Castle International Corp. (REIT) - Executive VP & CFO

And I think, Rick, just one addition to that. One of the reasons we're excited about the position we're in is that whether the carrier spend tilts towards towers or towards small cells in any given period, we are the beneficiary of that. And we think that having a solution-based offering as opposed to a product-based offering of we can help with networks is just a better place to be, as these networks will become more converged and the spending patterns of our customers are going to have to be more nuanced and nimble. And we think we're in a just a really good position to be part of that conversation at a much more meaningful level across the board.

Richard Hamilton Prentiss Raymond James & Associates, Inc., Research Division - Head of Telecommunication Services Equity Research

I guess, it's safe to say you're not going to put out like 5-year plans to different segments of the business?

Daniel K. Schlanger Crown Castle International Corp. (REIT) - Executive VP & CFO

No, that's not our intention at this point. Like I said, though, we'll take feedback and understand where people want us to go. What we're trying to do, as I mentioned a second ago, is really provide the type of information that we look at to assess whether the investments we're making are making sense or not. And that's really where we landed is you're seeing a lot of the information that we look at in order to make sense of what these markets and what these investments are doing. And you'll see that progression over time in a way that I think addresses the underlying question of whether this business is working or not.

A 5-year plan is obviously very difficult to make happen in a public context. But also, it's a set of assumptions that clearly won't come true. They may be directional. And we did those with our guidance and with our 7% to 8% target. So we think we're kind of right in line with what the core ask has been from the feedback and engagement we've got with our investors.

Operator

Next question is from Colby Synesael with Cowen.

Colby Alexander Synesael Cowen and Company, LLC, Research Division - MD & Senior Research Analyst

Two, if I may. First off, I think your fiber CapEx, including small cells and then the fiber solutions business was \$1.4 billion in 2019. Can you remind us or tell us what the guide implies, your expectations are for that in 2020? Just broadly, how you see that playing out over the next few years? One can make the argument, at least we potentially made the argument that given the significant investment in the last 5 years, you could potentially be in a position to sustain similar types of top line growth in your fiber business even at lower CapEx profile. I'm just curious how you think about that.

And then secondly, and I apologize for going back to this, but can you give us some color on what your services business looked like in the month of July? And I'm getting a lot of questions, and I'm sure other analysts are as well in terms of just investors really trying to get some more color on how you feel confident in maintaining your guidance for the back half of the year. And whether or not that's evident with what you're already seeing in July? Or does it still assume some significant ramp beyond what you're already seeing -- beyond what you're actually having in terms of conversations, and it's still somewhat of a hope opposed to real hard conviction?

Daniel K. Schlanger Crown Castle International Corp. (REIT) - Executive VP & CFO

Yes. Thanks, Colby. On the first question, our guide for 2020 is about \$1.2 billion of CapEx in the fiber business for both fiber solutions and small cells or fiber segment. And with your question on lower CapEx to sustain growth, it really is going to be predicated on how much colocation versus anchor builds we can have and whether we're building out additional portions with markets we're in or whether we're leasing up on the markets that we already have. And you can see that in some of our market analysis, something like Los Angeles, where we're actually adding a significant amount of yield, 230 basis points of yield over the 3.7 years that we've had these assets and a lot from the acquisition from the time of acquisition until now. That's more because of the co-location that's happening. And if we do that, yes, CapEx will come down. If we continue to build out markets, which we think, as Jay pointed out, is a good investment as long as they continue to meet our investment hurdles and the lease-up, we believe, is a reasonable assumption going forward, then that -- the CapEx intensity may be where it is now for a period of time. But much like the tower business, once we maintain a stable asset base and slow down that capital, we believe that is when the yields will expand significantly. It's just hard to tell from where we sit today when that might happen. Given the substantial ramp that we're looking at and what Jay alluded to a minute ago in the 5G build-out of small cells, it's just hard to know if it's going to take a few years or not for that stability in the asset base to happen and how that happens and where it happens, at which location. So we'll -- like I said, we'll give guidance in 3 months about what 2021 will look like. And hopefully, that will give another data point to inform what you're thinking on. But yes, there's potential that our growth rate can sustain and we bring CapEx down. There's also potential that our growth rate could expand and then we bring CapEx up, depending on the level of activity that we see coming.

Jay A. Brown Crown Castle International Corp. (REIT) - President, CEO & Director

On your second question, Colby, around what would we look at when we give the guidance. Certainly, we look at a number of factors. One of those factors is what is our most recent activity. And to your question, we definitely looked at the activity that we saw in July of this year as we consider what we were going to do with our outlook for the full year.

We also look at what is our application volume for the year as well as the conversations that we're having with carriers and the activity that appears to be coming. So it's a wholesome look in terms of all of the various factors that one would look at in order to try to figure out where we believe the activity is going to go.

And I think in the comments that both Dan and I have made in our call and as you saw in the press release, I think we're trying to point to the fact that we see every indication of an environment where activity and traffic is increasing and being exactly precise as to when that services activity of preconstruction work will show up. We do think it's -- we're going to start to see a meaningful increase in the second half of this year and then carry over into 2021.

Operator

And we'll go to Tim Long with Barclays.

Timothy Patrick Long *Barclays Bank PLC, Research Division - MD and Senior Technology Hardware & Networking Analyst*

One question, one follow-up, if I could. First, could you just give us a little update on edge compute, and you've got the deal with Vapor IO. So any developments there? And any change in outlook?

And then secondly, on the fiber business. I appreciate those target cities. Probably a difficult one to answer, but could you just give us a little color on how yields are different in markets kind of based on competition of fiber assets? I'm assuming some places are much less competitive and such more so. So what kind of a factor does that play into yields in some of these larger cities?

Jay A. Brown *Crown Castle International Corp. (REIT) - President, CEO & Director*

You bet. On your first question around edge compute, I mean we continue to see a significant amount of value and opportunity around that network or access edge, as we've described it, which really requires a combination of fiber and network integration. And Vapor has -- our investment in Vapor has continued to give us a pretty good view as to where we think the world is headed on that front. We're operational in about 4 markets today, and we're building out a number of other markets. It's not material to our overall results today, and I don't expect it will be in the near term, but I do believe edge compute is another example of why, as Dan mentioned in one of the questions earlier, this combination of providing a network solution to the carrier, the combination of towers and fiber gives us a really unique view as to where networks are developing and where the opportunity is. And edge compute is one of those that it's not in our model, it's not in our guidance for this year, and we're not thinking about necessarily a big impact in 2021. But over time, it's a way of adding additional revenues and cash flow to these assets that are really core to their network. They carry our customer network, and we believe there's opportunities that will result in higher yields on the investment that we've made as a result of the wholesome product offering that we have when we're talking with our customers.

On the markets, what I would tell you is it's -- from a competition standpoint, we have a very, very high win rate when we have existing fiber in the market. So as we go back and look at RFPs that have been issued by our customers in the markets where we already have existing fiber, we win a very, very, very high percentage of those RFPs as a result of having an asset that's there. That asset being present means that there's a shorter time to deploy for the carriers, which is attractive. And it means the shared solution that I was speaking to in terms of cost savings to the carrier is present. And so the competition doesn't really affect our yields. The discipline that we have around the requirement to be able to invest capital is in place, whether the -- regardless of the situation at a market-by-market basis. So if we're able to invest capital in the 6% to 7% initial yield and we think there's significant opportunity in the future and it's the market that we're not in, well, then that market is attractive to us and something we would potentially pursue. If those characteristics are not there and that it could be competition or any other number of factors, then we may just pass on the RFP as we do frequently.

In the places where we do have existing fiber and there's the opportunity to do colocation, I think the market analysis shows this and our practice in other places has shown this. We have a very high win rate when those RFPs are rolled out in places where we have existing fiber.

Operator

We'll now go to Brett Feldman with Goldman Sachs.

Brett Joseph Feldman *Goldman Sachs Group, Inc., Research Division - Equity Analyst*

When you originally gave your outlook this year before COVID, you had talked about some of the challenges at gaining the approvals you needed from municipalities and utilities to deploy small cells. And so just kind of limiting you to a maximum of 10,000 node deployments per year. I would imagine that COVID hasn't made that any easier. And if you sort of go back and think about the outlook you have for small cells, it seems like the funnel could theoretically increase significantly. Are you concerned at all that if these roadblocks aren't knocked down, you actually won't be able to accelerate the business as the demand backdrop improves? And then also, do your customers, the carriers have any advantages that you don't in terms of being able to move more quickly at a municipal level? Or do you all sort of operate within the same set of processes?

Jay A. Brown *Crown Castle International Corp. (REIT) - President, CEO & Director*

Yes. On the first question, and I know many of our employees listen to our quarterly calls, and I've just got to tell you what a tremendous job they have done, both on the tower and the fiber side managing through COVID. We have about 1,200 employees who are engaged in



operating roles out in the business. And all throughout COVID, they have continued to perform at an extraordinarily high level working with municipalities and utilities in order to deploy nodes. And we've had a number of wins even in the midst of COVID. So the day-to-day work, yes, it looks a little different as a result of COVID. But I think I'm so proud of our team who have not made excuses for the challenges that have arisen as a result of COVID, but have figured out ways to navigate in the new environment. And we don't know how long we're going to be in this environment. So our role and job for our customers is to figure out a way to navigate and get their network on air. And thus far, I think the team has done a tremendous job of that, and I have full confidence they'll be able to continue to navigate those challenges.

On the customer side, I don't believe there are any advantages that our customers have at the market level working through those utilities and municipalities relative to us. I believe some of the work the FCC has done has set forth some standards and guidelines around pricing and terms that benefit everybody in the market. And obviously, our interests are completely aligned with that of our carriers. To the extent that we can get them on air on a lower cost solution than them building against themselves, they want us to do well. And the same is true for us in the places where we're not building fiber and they're having to self-perform. It's in both of our best interests to work together to figure out ways to navigate at the local municipality and utility level, and we frequently work together in order to accomplish that. So I think there's shared interest rather than a competition on that front. Doing it well goes better for everyone.

Brett Joseph Feldman *Goldman Sachs Group, Inc., Research Division - Equity Analyst*

And just to clarify, it does seem like at least right now in the midst of all this, you still have been able to generally meet the deployment goals you've set out earlier this year. Is that fair?

Jay A. Brown *Crown Castle International Corp. (REIT) - President, CEO & Director*

No, that is fair. That's what we've -- we set the targets ahead of time, and we've learned to navigate in the new environment that we're in and believe we can continue to do so.

Operator

And Michael Rollins with Citi is next.

Michael Rollins *Citigroup Inc., Research Division - MD & U.S. Telecoms Analyst*

A couple of questions. First, on the strategic side of the fiber business. Can you give us an update on the strategy around market exposure? I think in the past, you talked about top 25 markets being the larger focus for the company. I'm curious how that stands today and how you see that evolving over the next few years.

And then just a question about some of the new disclosures. So I think we've learned from a lot of the companies that we cover that there are many different ways to define return on capital. And so I'm curious if you could unpack the philosophy within Crown with what you included in the calculation and maybe some of the things that you didn't include in the calculation, whether it be SG&A for the fiber solutions business, maintenance CapEx or the adjustment to add back, I think, some labor costs in that fiber return calculation?

Jay A. Brown *Crown Castle International Corp. (REIT) - President, CEO & Director*

Michael, on the first question, and I'll take that one and then I'll let Dan take the second one. We are -- as you correctly stated, we have been focused and have spent the majority of the capital in the top 30 markets in the U.S. We think that will be the biggest driver of long-term lease up around small cells. And so there's no change in terms of our overall view of where capital continue to go and where we think investment by the carriers will be primarily as we move from 4G into 5G.

I certainly believe the carriers are going to be going to markets beyond the top 30 markets, and there may be occasions where we choose to make investments and pursue opportunities as we move beyond market -- top 30 markets in the U.S. We'll make those decisions on the same basis that we got us into the top 30 markets in the U.S. That is around what are the initial returns on capital and then what do we think the lease-up opportunities are around that capital over the long term and do they meet our internal hurdles of driving long-term shareholder value. But I think you should expect, we'll continue to be mostly focused on kind of those top markets, top 30 markets here in the U.S.



Daniel K. Schlanger *Crown Castle International Corp. (REIT) - Executive VP & CFO*

Yes. And Michael, on your second question on our return on capital definitions. What we're trying to provide with that is a view of what we think a more normalized return will be over time when we're not investing so heavily in the building out of assets. So what we did is we try to be very clear on these on the calculations we've done, so people can look at them however you want to look at them. But the way we think about it is what would be our yield on the asset if we were to operate the asset as it is today? And those indirect labor costs, which I think is the biggest adjustment we made, are people who are working on building out our fiber assets over time and therefore, not part of the ongoing operating cost structure that we think will be required in order to maintain that asset base for the long term. And we thought that burdening currently the return with what is going on in order to build new assets is not exactly a -- is not representative of what we think the asset is yielding as it sits today.

Thinking about it a little differently. It's like including acquisition costs in an ongoing basis. It just doesn't really provide the insight into what the long-term return aspects will be of the business. What we're trying to do in giving all of that detail and in providing the calculation itself is to give away how we think about these things and why we think about these things. They give you the ability to look at it however you want to look at it. So we're, again, happy to take feedback on this is kind of our shot at what we think is the right way to look at it and how it is internally how we look at it. But we will be happy to take feedback and think through if there are other ways that more closely align with what investors would like to say.

Operator

We'll now go to Spencer Kurn with New Street Research.

Spencer Harris Kurn *New Street Research LLP - Analyst of Towers and Infrastructure*

So I have a question on colocation that you've seen in small cells. You've made it pretty clear that the yields and returns you can generate along small cells are largely a function of node density. And you talked about deploying anchor builds with 2 to 3 nodes per mile. But if we look over the last couple of years, we haven't really seen those levels of lease up. I think in 2019, you added around 1 node per new fiber mile. And for the business to really inflect, I think we would need to move towards higher nodes per mile deployed in the future. So I was just wondering if you could comment on why we haven't really seen the levels of node density for anchor builds, at least that you speak to in the reported figures so far?

Jay A. Brown *Crown Castle International Corp. (REIT) - President, CEO & Director*

Sure, Spencer. And I think this is where the 5 markets that we laid out are so helpful, right? Because you can look at Orlando, where we've got 19% recurring cash yield on invested capital, and we're at about 2.5 nodes per mile. And then you look at Denver, and we're at 3.8 nodes per mile and we're at a 5.5% yield. So the metric that you're referencing in terms of density of nodes is an input that we look at, and we certainly watch what is our density of node. But we're much more focused on what is the return on invested capital, what's the return on that capital that we've invested and driving that return over time. And as you look at the -- whether it's the whole portfolio, as you look at these individual markets at points in time, you're going to see some movement there that if all you zero in on is just 1 single metric nodes per mile, you'll miss the broader picture of what's happening in terms of return and yield.

And the way we're negotiating contracts with customers, whether it's colocation or anchor builds, we're negotiating those contracts based on a return on invested capital. So the metric is interesting. And certainly, it's something we track and we look at, but we're much more focused on the financial returns than we are a singular metric around nodes per mile because it's not necessarily the best predictor.

I think you can look at the tower business on the slide where we laid out tenants per tower. And you can see that dynamic playing out in tenants per tower as well, where people would say, obviously, in the tower business, you want to watch how many tenants are on each tower, and that's the best predictor of returns. And it is a good predictor of returns, but it's not a perfect correlation. You can see in the tower business, we've been able to grow yield on those assets without a direct correlation to a change in tenancy. And I think the same thing has played out thus far in small cells and will continue to play out. So the driver will be this big wave of demand, which will drive density across -- of nodes per mile. But we're watching carefully the financial returns and think that's the best predictor of it.



Spencer Harris Kurn *New Street Research LLP - Analyst of Towers and Infrastructure*

Got it. And just 1 more question, if I may. Big question I get is about small cell pricing upon renewals. And the concern is that unlike a tower, we've got very few -- no competition. With fiber, you've got competitors pretty close by. And so I was wondering if you could comment on pricing trends that you've seen around renewals, whether you're able to continue escalating the nodes at the original contract rate? Or have you seen any signs of pricing pressure?

Jay A. Brown *Crown Castle International Corp. (REIT) - President, CEO & Director*

Sure, Spencer. As you can see on the slide, Slide 4, when we talk about the escalations and the contractual terms and churn and other things, we've seen no difference in the small cell business relative to towers. As contracts have come up for renewal, they've been renewed at a rate that is in line with where towers are, if not a little bit higher. We've seen no roll-off of tenants. And this goes to the critical network nature of these assets. The carriers are putting in these small cells and locations in order to offload traffic off of the macro site in order to improve their network. And just like on macro sites, they're mission-critical to their network. And they're designed in order to help that network perform better.

So as we get to renewal, the carriers have invested significantly around the exact location where that node is and have added additional nodes and macro sites in order to provide a solution to the consumer that is ubiquitous. And as they come up for renewal, there's nothing about that renewal that, frankly, we think will change the necessity of the location that they've picked and then design their network around the rest of the network.

The other point I would make about small cells and pricing and towers that I think is helpful and certainly has played itself out as you think about the returns and the yields here. One of the things that our carrier customers have desired as we've gone down the path of small cells is they've desired to put in additional capital upfront beyond just us putting up 100% of the capital as we deploy small cells. And if you look at the math, as Dan was walking through earlier in terms of total capital that we'll spend this year of about \$1.7 billion and prepaid rent that the carriers put in of about \$600 million upfront, so on a net basis, we're putting in \$1.1 billion of capital. In essence, you can think about that as each carrier customer goes on, they're paying for 1/3 of the infrastructure an upfront capital or some component of that upfront capital, which means from a competitive standpoint, over time, as renewals come up, they've already reduced the capital base and therefore, the market rent, if you will, is already embedded in the upfront investment that they've made. So our assets sitting there, our net investment of the assets sitting there is at a price well below what a market price would be if someone were to have to go and overbuild it or try to put in new fiber or put in a new small cell.

And that dynamic, I think, also is helpful. I don't believe it's solely the driver historically. I think it's much more like towers in terms of network design. But if you want to do the practical math associated with it and think about how does it play out over time, the entry point for somebody else coming to market, we're sitting there with an asset that's priced significantly below what the cost of deploying a new asset there would be. And we think, over time, that gives even greater strength to the fact that at renewal, we'll see very high renewal rates for a long period of time.

Operator

Next is Nick Del Deo with MoffettNathanson.

Nicholas Ralph Del Deo *MoffettNathanson LLC - Analyst*

I appreciate disclosures and look forward to see how the stats evolve over time. Just having it aside, if you're willing to publish the historical data for those 5 cities for 2018, 2019, I think folks are finding them interesting just we have initial time series to work with. Jay, you've emphasized that it's hard to put together a specific long-term fiber forecast. Since the business is in its early stages, and there's a wide variety of potential outcomes from here, I think that all makes sense. How do you then judge whether or not the fiber strategy has been a success sort of in a bigger picture sense? Is there some yield that you have in mind 5 or 10 years out that you'll reflect upon and say, yes, the strategy worked? Are you saying that it's so past dependent that you can't currently define what's going to count as a good outcome looking ahead?



Jay A. Brown Crown Castle International Corp. (REIT) - President, CEO & Director

Well, I think the simple measure upon which we measure the entire business is, are we growing the dividend, which is from a payout standpoint, tied to our operating results. Are we growing it in line with the target that we've laid out? 3 years ago, we told the market as we did the investment in Lighttower that we would raise our long-term growth rate from 6% to 7% in terms of dividend and AFFO per share growth on an annual basis. We're going to increase it to 7% to 8%. And over the last 3 years, we've delivered that dividend growth tied directly to operations at the 8% level, increasing the dividend by about 26%, 27% over that period of time. I think that is the best measure of value over time as to how the business is doing.

As we laid out on Page 8, Nick, I think this is the way to think about what are the potential value opportunities here around small cells? So if you believe kind of the total addressable market that we lay out on Page 7 and the opportunity there, to the extent that we capture the fair share of that addressable market across the assets that we own, we believe we have an opportunity here to outpace our projected growth rate over a 10-year period of time of 7% to 8% and potentially do much better than that. And conversely, if things don't go as well, then we've shown some of the downside there. And as we look at that, as that -- as we look at that graph, and it's something that we've done as we look at -- analyze our own investments and how are we positioning the overall firm, the thing that continually strikes Dan and I about this is how asymmetric the reward versus the risk is here. And we believe the business will play out 4G going into 5G densities, and all we've had to underwrite is 4G densities, and we've positioned ourselves for significant upside. And as owners of the business, we look at this and think this is a great place to be. We're leveraged towards the upside. We're leveraged towards where the world is headed. We're staying relevant with our customers because this is where their networks and their deployments need to go. So we've positioned the company for future growth. And we've positioned that growth with limited downside risk if we're wrong. Certainly, we're in the business because we think it will create long-term potential value. If at some point, the scenario comes out that, that doesn't play itself out, then we'll pivot away and make a different decision. But all everything that we're seeing as we laid out on this call this morning and this sort of reward versus risk trade, we like where the business is positioned and think it gives a lot of optionality to the upside with limited downside risk.

And in the -- in between, between now and the long term, how do we measure the performance? The way we measure the performance is what we were showing on the 5 fiber markets that we laid out. These are the things that we're looking at internally day in and day out. We look at the performance at the market level to see whether or not is the strategy playing out? Are we seeing colocation that's driving yield? And as we look at each of our markets as representative -- as represented by these 5 markets on the page, we are seeing that, and that emboldens the confidence that ultimately, if we do it well in the micro, ultimately, that will show up in the macro, and that leads to sort of an outcome that shows up on Page 8.

Operator

We'll go to Batya Levi with UBS.

Batya Levi UBS Investment Bank, Research Division - Executive Director and Research Analyst

A couple of follow-ups. I think the small cell construction CapEx in the quarter was down sequentially slightly, but the nodes you brought down were minimal in the quarter. Can you help us reconcile why there is a difference? And if we should still expect the 10,000 build for the year?

And a second question on the revenue per small cell node. It looks like it came down on an annual basis. Is that a function of a lower contribution from prepaid rent? And how should we think about revenue per node for the anchor tenant incremental nodes versus a second tenant that you're adding?

Jay A. Brown Crown Castle International Corp. (REIT) - President, CEO & Director

Yes. On the first question around small cell CapEx, it wouldn't be too tied to quarterly movements around our CapEx. Obviously, we're doing work on nodes that will be turned on in the third quarter and the fourth quarter and subsequent periods. So I don't think that math is going to give you a real good indication of the cost. Our general cost per node has stayed at around that \$100,000, including cost of fiber, and the real estate cost of building a node, and we haven't seen that really changing at the market level. We do believe that we will continue to deploy about 10,000 nodes in calendar year 2020.

Your last question there around revenue per node. I think this is one of the things that's helpful about laying out these 5 markets, as you can back into the math around contribution in each of those markets. We price this business on a yield basis. So there's not a -- we're not thinking about it necessarily on a revenue per node. We think about it as a return per node or a yield on a dollar of invested capital. So the pricing is going to be determined market-by-market or quarter-by-quarter, if you were laying out the numbers there are going to be determined based on where do we turn nodes on and what was the underlying costs associated with building those nodes, and that will impact our revenue per node. So revenue per node is not a metric that I would point you towards as being indicative of how the business is performing, better off looking at how yields on invested capital are going.

Operator

We will now go to Brandon Nispel with KeyBanc Capital Markets.

Brandon Lee Nispel KeyBanc Capital Markets Inc., Research Division - Research Analyst

Dan, can you help us understand what was the quarter-over-quarter or year-over-year change in the backlog that's signed, but not commenced new leasing so far in 2Q? And maybe help us understand where that would have been and where that should go in the second half of the year?

Second, really on DISH. I mean, I know it's not in guidance, but what would it take in your view for DISH to be an incremental 50 to 100 basis points contribution to your growth in the next couple of years?

Daniel K. Schlanger Crown Castle International Corp. (REIT) - Executive VP & CFO

Yes, Brandon. I'm sorry, I missed your first question. I didn't quite follow it. Could you just restate that? I'd really follow that.

Brandon Lee Nispel KeyBanc Capital Markets Inc., Research Division - Research Analyst

Yes. I guess what I'm curious about is what your backlog looks like in terms of signed but not commenced new leases. How that trended from a quarter-over-quarter and a year-over-year standpoint? And really help us figure out and help us understand where that should go in the second half of the year because that will help inform our assumptions for 2021.

Daniel K. Schlanger Crown Castle International Corp. (REIT) - Executive VP & CFO

Yes, sorry about that. I got it now. The backlog is relatively consistent year-over-year as we look at it right now. What we do expect as we see the activity levels picking up in the back half that the backlog will increase. And as applications come in to add more to the tower side of the business, that those will lead into 2021. So we would expect the back half of the year to have more activity, more leasing and more backlog as we look into the end of the year and then into 2021.

Jay A. Brown Crown Castle International Corp. (REIT) - President, CEO & Director

Brandon, on your second question around DISH. Obviously, they've made significant commitments to the regulators around what they're going to deploy and have been very public about their intention to build a nationwide network. And we are focused on being a terrific partner with them and working hard to ensure that they're able to meet those targets that they've set out for themselves over the next couple of years. And as we get into the impacts to future years, I think I'll wait until October to give you some view of what we think the impact in 2021 is going to be. But we're zeroed in and making sure that we're being responsive to what could be a significant customer over the next few years as they build out a nationwide network.

Operator

And our final question will come from Tim Horan with Oppenheimer.

Timothy Kelly Horan Oppenheimer & Co. Inc., Research Division - MD and Senior Analyst

Could you give us a breakdown on percentage of fiber CapEx that's for geographic expansion? And where do you think you are in the geographic expansion for the top 30 markets?

Jay A. Brown Crown Castle International Corp. (REIT) - President, CEO & Director

Yes. I think generally, what I would tell you is about 70% of the activity that we see on fiber side with small cells are anchor builds. So think about that as geographic expansion. It very well may be in the top 30 markets, but it's in portions of the market that we don't have fiber existing. And then about 30% of the activity is going to be in places where we already have existing fiber and we're colocating. So that's not a perfect correlation to the actual capital dollars because co-locations obviously require far less capital. But in terms of activity, if you're trying to get a sense of how much of the activity that we have going on is new market expansion, and I would put into that new market expansion really the markets that we're already in, where we're investing and expanding the plan inside of those markets as compared to going on existing fiber is probably the best indication of that.

Timothy Kelly Horan Oppenheimer & Co. Inc., Research Division - MD and Senior Analyst

Yes. That's great color. And then, Jay, what gives you the confidence that the small cell demand will be there? Only because it's been -- the growth has been a little bit below investors' expectations and T-Mobile's engineers seem to be a little discounted with small cell. Verizon seems to want to build their own. I mean what gives you the confidence that, look, the demand is going to be there? These million nodes, we have a lot of visibility on it. Because you obviously have 10x more visibility than we do on the outside.

Jay A. Brown Crown Castle International Corp. (REIT) - President, CEO & Director

I think there's a few things that are confidence building around that front. One is we firmly believe in the necessity of it. So as we look at data traffic growth that's occurring in the market, there is not a solution for that -- for meeting that growing demand from the consumers by solely using macro sites in order to meet that demand. So there is a tailwind of growth -- tailwind to the growth that is going to continue to drive the need for additional investment in infrastructure. And small cells are the next best, most cost-effective way for the carriers to solve that challenge of growing demand on the networks.

Second thing that gives me a great deal of confidence that the business is going to work is that the carriers are very good at managing the cost structure of their network. And we have watched over the last 20 years as the carriers have migrated their entire network onto other people's towers as a result of it being a much lower cost solution than owning it themselves. So in the places where they can significantly lower their costs, as I mentioned earlier in the call, they can lower their cost of deployment by about 50% by using our infrastructure versus their own cost of ownership. That cost savings is meaningful and significant and they're thoughtful allocators of capital and managing their income statement, and I think that ultimately will carry the day.

As I said in my prepared remarks, obviously, no one can accurately predict exactly how much is going to be needed. But if thematically, you believe in the U.S. that a decade and 2 decades from now, people will use wireless networks in greater ways than what they do today, then you basically believe that there's going to be an increase in traffic. And the assets that we own, both towers and small cells, are standing in front of that growing demand. And I think the infrastructure assets will do really well over a long period of time as a result of positioning themselves right in the midst of a big macro trend that's going on in the world. And that's -- those 2 reasons give me the most confidence that this strategy is right and that we're going to deliver terrific shareholder returns over the long term.

So I really appreciate everyone joining us this morning. Thanks for the time, and we look forward to the conversations and the feedback over the coming days. Thanks so much.

Operator

And thank you very much. That does conclude our conference for today. I'd like to thank everyone for your participation, and you may now disconnect.

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