

BIG SOLAR COMES TO TOWN

THE BOOMING BUSINESS IN RENEWABLE PROJECTS
IS JUST STARTING TO LIFT OFF AROUND AUSTRALIA

WORDS SOPHIE VORRATH

When Rebecca Meek was sent to Australia from Britain by her employer, global renewables developer RES, her brief was to find suitable sites for large-scale solar photovoltaic farms.

Meek, a renewable energy project development manager with four years' experience building solar and wind farms in the UK and Ireland, went straight to Australia's Sunshine State and, quite literally, found a gem.

Her first project is in Emerald, a town in Queensland's Central Highlands where RES is set to build a 70MW solar farm—a \$100 million project on a 160ha privately owned site that marks a first for the company's Australian business. That's enough to power up to 28,000 homes.

The project attracted attention for its long-term deal with Australian telecoms giant Telstra, which agreed in May to buy the solar farm's output—marking one of the nation's first major corporate renewables off-take deals. And it was achieved in just 15 months from the time Meek stepped off the plane.

"One of the things key to solar development in Australia is finding sites that are going to be easy to build [and] cost-effective [so] that we can deliver the lowest cost of electricity," Meek says.

Meek was blessed with a "very sophisticated" in-house team, who worked with her to mark

grid lines, find areas of potentially increasing electricity demand and map realistic distances from existing power substations and transmission lines while identifying potential site constraints.

"We spent a lot of time looking at the capacity in the line but also [working out] where you're not going to be overly constrained with the amount of solar development in the area," Meek says.

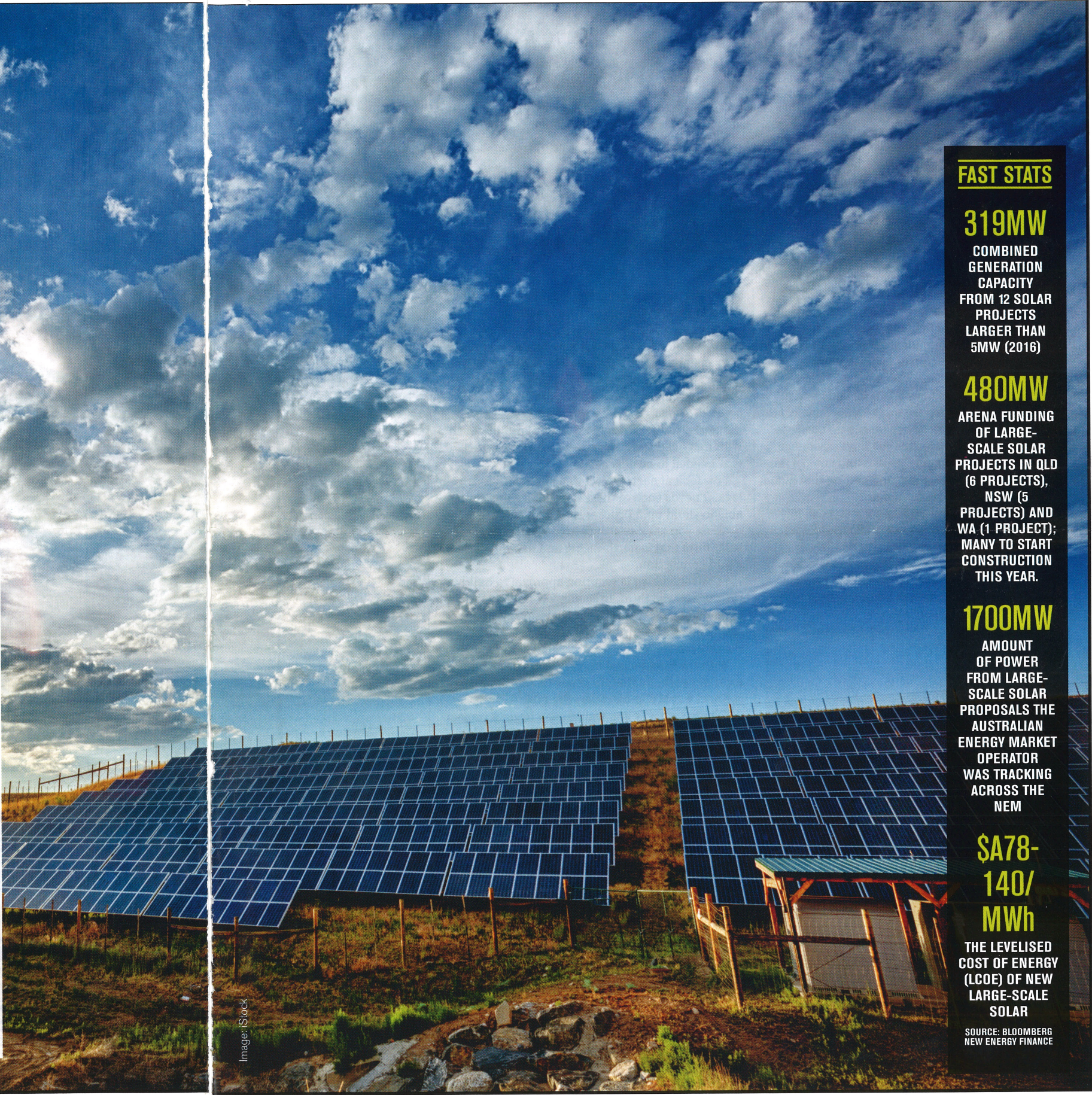
Elena Zagorenko, MAIPM, CPPD, says the tussle for space on the grid is nowhere fiercer than in South Australia, where more than half the demand is met by renewables.

"In SA, you have [renewable energy projects] fighting for places to connect," says Zagorenko, who before becoming SA chapter president was 2015 National Project Manager of the Year for her work at transmission company Electranet. She says the growing complexity of hooking into the grid forces network companies into uncharted territory.

This includes questions around adding grid-scale energy storage, such as pumped hydro, and big battery systems to smooth the transition to high-renewables grids. And since SA's statewide blackout last summer, "the stakes are even higher than normal", she says.

But Queensland has more room to move.

"Emerald was one of the first [potential sites] I found when I got over there," says Meek. »



FAST STATS

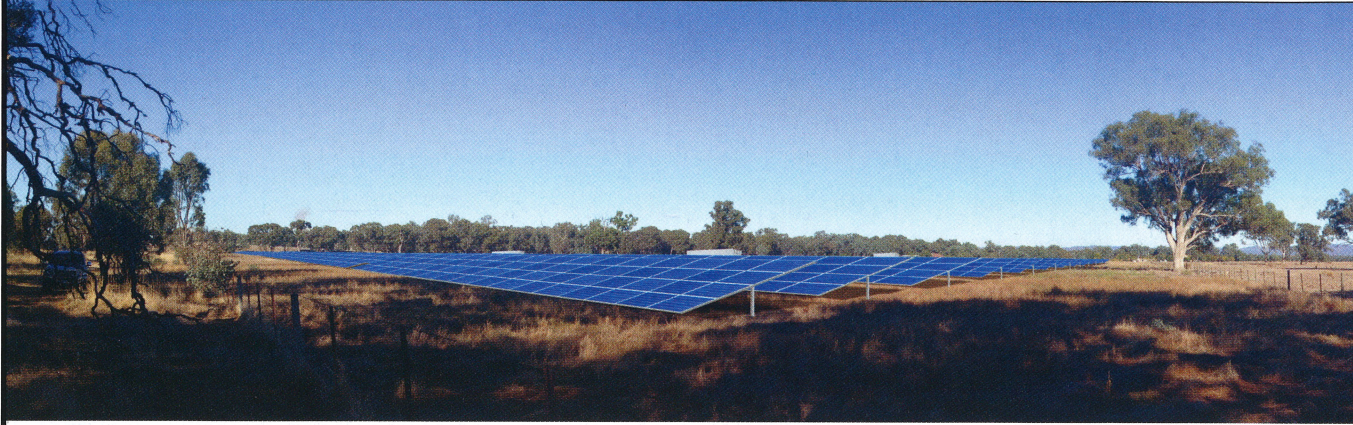
319MW
COMBINED
GENERATION
CAPACITY
FROM 12 SOLAR
PROJECTS
LARGER THAN
5MW (2016)

480MW
ARENA FUNDING
OF LARGE-
SCALE SOLAR
PROJECTS IN QLD
(6 PROJECTS),
NSW (5
PROJECTS) AND
WA (1 PROJECT);
MANY TO START
CONSTRUCTION
THIS YEAR.

1700MW
AMOUNT
OF POWER
FROM LARGE-
SCALE SOLAR
PROPOSALS THE
AUSTRALIAN
ENERGY MARKET
OPERATOR
WAS TRACKING
ACROSS THE
NEM

**\$A78-
140/
MWh**
THE LEVELISED
COST OF ENERGY
(LCOE) OF NEW
LARGE-SCALE
SOLAR

SOURCE: BLOOMBERG
NEW ENERGY FINANCE



"Once we found it and discovered it had a keen landowner, we spent a lot of time building up key relationships with the landowner, the property's neighbours, council and local utility [Ergon].

"We like to pride ourselves on doing that early work."

This early work also pays off at the latter end of the project. "With the speed that solar is moving at, for us to get to the point where we can do the close process as quickly as possible is a huge advantage.

"It's about weighing up the pros and cons of the site... It's about going on-site and getting that gut feeling: can I see a solar farm here?"

At the opposite end of Australia's east coast, in North East Victoria, Geoff Drucker, Director of local outfit Countrywide Energy (CWE), paves the way to build one of the biggest solar farms in that state: a 20MW project in the regional city of Wangaratta, slated to begin construction in late September.

COMMERCIAL SOLAR SHINES

The fastest-growing sector of Australia's solar market is in small, commercial-scale systems of 75-100kW, with 752MW of capacity added last year.

On the medium scale, 68 new solar projects sized between 100kW and 5MW were commissioned, adding 23MW of new capacity. About 40 are larger than 500kW.

This sector is also expanding quickly, as businesses, schools and NGOs decide to maximise their roof space to minimise their electricity bills.

Many clients with high daytime power demand commission the projects with specific system design and management requirements.

A recent example is the 750kW solar array to be installed on the refurbished roof of the council-owned Wangaratta Livestock Exchange. The project, developed by Countrywide Energy, will see CWE lease the council's roof and either offset the energy generated against the council's power bills or sell the energy to the grid, or a combination of both.

"It's an interesting case in that the local council came to us with the idea," says Drucker.

"They were concerned about local energy security and keen to attract new businesses while also sustaining the businesses that already operate in the area. They asked us what we could do."

The answer, in this case, was for CWE to lease council-owned land adjacent to an existing industrial estate and build a solar plant. But even with this head start, there were plenty of boxes that needed to be checked.

"We look at each project as a chair with four legs. It needs each of these legs if it's going to be able to stand up," Drucker said.

"First you need to secure land for the proposed solar farm that is north-facing and flat and close to a grid connection.

"The second leg is securing approval to build the project; the third, to secure a connection agreement with the local transmission company; and the fourth leg is to get the money to build the project."

With the land locked in, CWE approached the local network, AusNet, to ensure it was happy to connect a 20MW project into the grid.

"There's no way you would even begin a project unless that energy could be sustained," Drucker says. "We aim for the edges of the grid, the end of the line, where there are communities and businesses that need surety of supply.

"The site also needs to be near existing transmission infrastructure, otherwise it will be too expensive to build. Then you have to go through the process of advertising the project, fielding complaints and addressing those complaints to ensure issues are met."

Like RES, CWE sees community engagement as one of the "really important parts" to kick-starting a large-scale solar project.

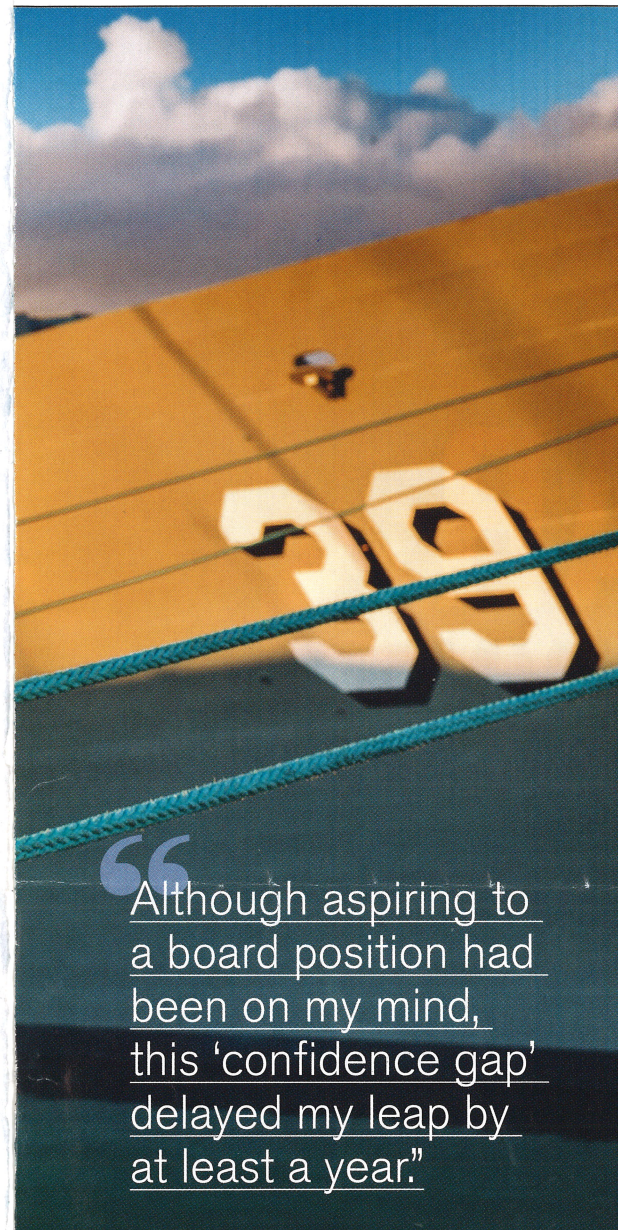
"You have to ensure that your community consultation is as strong as it can be. Be in and among the people to ensure they understand.

"Once you inform people about what these projects are about and what they can do for the community... you've already developed an affinity for renewable energy in that community," he says. ♦

In late September, Countrywide Energy will commence construction of the biggest solar farm in Victoria, a 20MW project in the regional city of Wangaratta.

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Image: Countrywide Energy



“Although aspiring to a board position had been on my mind, this ‘confidence gap’ delayed my leap by at least a year.”

but with limited education they relied on me for guidance. I learned that communication is not just delivering information but a two-way street where the speaker adjusts to the audience's expectations, values and life experiences.

When I decided to become a formal project manager, I knew to throw myself into a situation where I had the most to learn, an industry where I was a complete outsider. And so I joined defence contractor BAE Systems Australia.

I was in a male-dominated environment surrounded by strong personalities—many of them with highly respected Defence Force leadership backgrounds—where my skills and personality would be tested. I'm very proud to have flourished in this environment and applied earlier career lessons to earn the respect of my colleagues and achieve tangible successes.

The learning curve when you join a new workplace or team is daunting, so my advice is to go easy on yourself; don't feel as though you need to know everything and fit in straight away. The BAE director said it would take six months for me to learn their language, and although I feel I'm a quick study, he was right.

My crowning achievement in this role was when, as the Manager of Project Management and Business Improvement, I was instrumental in setting up BAE Systems Australia's Balanced Scorecard and Business Excellence programs. When I read news of the success of SA Defence projects, I take some pride knowing that I contributed to this important sector.

But I didn't realise how much I was learning and achieving at the time. I'm a person who learns by doing and, by turning up to work and collaborating with colleagues, I developed myself even while I helped my team to succeed.

For all my wins, I've had as many losses. The important thing is to acknowledge and learn from mistakes. I still have to be mindful of when I need to push back when people (regardless of their position) want to impose directions with which I disagree.

I wish I'd had this instinctive confidence when I was much younger. But this strength can only come from accumulated lessons learned through my career and personal life. Every mistake I made along the way contributed to that, and I'm grateful for it.

Self-assurance would have made my journey onto the AIPM board a bit faster and smoother. Although aspiring to a board position had been in my mind for some time, this "confidence-gap" delayed my leap by at least a year. I started to read articles and prepare myself mentally for the challenges. By coincidence, I was becoming more involved in the AIPM SA chapter and the two life paths just converged when I put out feelers to see if I could garner support.

Here's a lesson I'd like to pass on: you can never network enough. I asked people I knew in the AIPM if the institute was looking for seasoned PMs or would take on a younger and less experienced candidate? The response was an overwhelming "yes". Emboldened by their confidence, I nominated and was appointed at the 2015 Hobart conference. The next three days was a whirlwind of handshaking, congratulations and many high-level talks with senior PMs and AIPM heavyweights.

What I take away from this is networking is the key to a modern PM's success. Whether it's face-to-face or on social media (I became active on AIPM's LinkedIn group and my own Twitter) you have to get your brand out there. It was an uncomfortable awakening for me, but it's a key part of my success.

Although life is more than just career, I reject the phrase 'work-life balance': everything I do, personally or professionally, contributes positively to my life. Sometimes my to-do list is work-focused and sometimes it's not, but it is always something I attack with all of my energy and enthusiasm. ♦

Nicole Nader, MAIPM, CPPM, is a risk manager in the Air Warfare Destroyer program in SA.

NICOLE'S TIPS FOR SUCCESS

- **Network, network, network:** Speak at AIPM events; share on LinkedIn and Twitter; blog about your projects. Just get out there and get known.
- **Be as confident in yourself as others are in you:** I never knew I had as many supporters as I did until I started asking them about my chances to join the AIPM board.
- **Speak plainly:** Most of those who congratulated me after the board appointment I had never met, but many said they voted for me on the strength of my no-nonsense responses.
- **Be kind to yourself:** As PMs, we tend to feel we always need to know all the answers. But give yourself time and space to settle in and to grow.
- **Find a mentor:** I'm blessed to have Mike King, FAIPM, CPPD, as a 'spirit guide' and confidant. I like to think our sharing is a two-way street. If you don't have a mentor, recruit one to your side.