

# Now we are one

As we celebrate our first birthday today, we hope you'll allow us a little self-indulgent reflection.

When *Nature Energy* launched one year ago, it was with the aim of helping to tackle energy challenges being faced globally by offering a venue for the dissemination of research and opinion from across academic disciplines. By showcasing top research from the natural and social sciences, we hoped that we could keep researchers in all spheres up to date with the most interesting advances across the energy sector, thereby helping them to build bridges with new insights that might help them to further their own research even more. It was our hope that orienting ourselves around the subject of energy — rather than distinct disciplines within it — would not only help researchers discover things they need to know about, but also learn more about aspects of energy research they didn't know they need to know about. Judging the degree to which we've accomplished that in just one year is difficult. Nonetheless, we thought we'd take the opportunity to reflect back on 2016 and look ahead to 2017 and beyond.

Let's get one of the more contentious events out of the way first. In a few days, Donald Trump will become the forty-fifth president of the United States. In October, we explored the possible energy implications of either a Clinton or a Trump presidency (<http://go.nature.com/2hqr4u>). An important issue that arose from those pieces — one that has also been championed elsewhere — is the need to not take the low-carbon energy transition for granted. As momentum continues to grow elsewhere in the world for more renewable and clean energy sources, understanding the likely future impact of changes in US policy is increasingly important. We wait with anticipation to see what Rick Perry (a man who once wanted to close the Department of Energy) will do during his first year as Secretary of Energy and how you will respond to it.

Elsewhere, you'd be hard pressed to think about energy in the last year or so without also thinking about storage, in its various forms. In September, we published a Focus on post lithium-ion batteries (<http://go.nature.com/2cvIIPQ>) that explored four candidate systems that go beyond current lithium-ion technology. It remains free until March. We also looked at issues of battery safety<sup>1</sup>, gas storage<sup>2</sup>, and hydrogen

generation<sup>3</sup>, as well as considering possible investment routes for stationary storage technologies<sup>4</sup>. As commercial home storage continues to expand, this topic remains of high interest and we anticipate more research on the science and social impacts of storage to appear in the near future.

Renewable energy technology naturally had a strong presence in our first year. In addition to many advances in photovoltaics based on hybrid organic-inorganic perovskites — which continued to address their various challenges to commercialization — and other platforms like CdTe and Si, Sivaram and Kann<sup>5</sup> argued for a more ambitious cost target for solar energy of US\$0.25 per watt, or US\$0.01–0.02 per kWh. Other studies sought to understand the differences between wind power approaches in China and the US<sup>6</sup> and to calculate the potential wind energy that could be generated and successfully integrated into the grid in China<sup>7</sup>. A final study<sup>8</sup> late in 2016 presented insights from a global survey of wind energy experts, offering an analysis of their predictions for future costs and changes to the technology.

Transport is of course a key issue for the energy transition. In February, Noel Melton and colleagues<sup>9</sup> analysed how society had changed its focus of interest between alternative fuel choices over thirty years, giving their recommendations for how to move beyond hype and create sustained support for adoption. Six months later, Jessika Trancik and co-workers<sup>10</sup> found that 87% of vehicle-days in the US could be met using a currently available electric vehicle charged just once per day.

Behavioural research also represents a pivotal approach to tackling our energy problems. A Comment from David Bidwell<sup>11</sup> looked at public participation in renewable energy infrastructure decisions and how it might be made more effective. Meanwhile, Hilary Boudet and colleagues<sup>12</sup> presented their findings on a behaviour change intervention to promote energy saving practices among families. Given its centrality to so many aspects of energy transitions, we hope to bring you many more insights on behaviour in the near future.

Another theme that is particularly important to us is energy access.

Connecting the more than 1 billion people still lacking basic energy services — and doing it sustainably and cleanly — will be truly transformative, creating a richer world for all. We're pleased to have been able to feature studies tackling this issue, including a large household survey of satisfaction with electricity supply in rural India<sup>13</sup> and an examination of the interplay between climate mitigation and clean cook-stove policies<sup>14</sup>, which found that without additional support, fuel price increases resulting from climate policies could leave millions without access to clean cooking fuels. We're looking forward to covering this topic further in due course.

There are of course many other papers that we would love to discuss here, not to mention the many Reviews, Perspectives, Comments, News & Views and Features that we have published. And while we feel we've made strides towards achieving our intended goal of showcasing research across the many relevant disciplines, there is still much for us to do. The reception we have received across energy research — reflected in the enormous diversity of submissions to the journal — has been extremely heartening. We hope to build on that further this year by bringing you more exciting research and opinion from even more areas. We remain committed to the idea that a holistic view of energy will ultimately bring the most rewards for us all — we hope all you readers, authors and reviewers continue to support us in this endeavour through the coming months and years. □

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