Obama urges climate action in State of the Union speech

US president also proposes new public-private partnership in personalized medicine.

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US President Barack Obama laid out his agenda for the coming year in a speech to Congress.

US President Barack Obama reiterated his commitment to tackling global warming in his annual State of the Union address to Congress on 20 January, describing the perils of rising temperatures as the greatest threat facing future generations.

"2014 was the planet's warmest year on record. Now, one year doesn't make a trend, but this does — 14 of the 15 warmest years on record have all fallen in the first 15 years of this century," Obama said. "The Pentagon says that climate change poses immediate risks to our national security. We should act like it."

It was a short but forceful statement in an address that focused mostly on rising economic prosperity, social equality and national security — as well as the economic benefits of rising oil and gas production in the United States. Environmentalists praised the president for laying down a political line, as his administration pushes forward with regulations that are intended to reduce emissions from power plants as well as from oil and gas drilling.

"The language on climate was very strong," said David Goldston, director of government affairs for the Natural Resources Defense Council in Washington DC. Obama "has a positive agenda he is going to move forward on, and the Republicans have got nothing more than backward promises to block action," Goldston added.

Obama also promised to make the United States an international leader on climate-change policy, citing a recent deal that his administration reached with China that commits both nations to reducing emissions over the coming decades.

Republican leaders balked at the address and vowed to press forward with their own energy agenda, which begins with legislation to authorize the controversial Keystone XL pipeline. Keystone would carry crude oil from tar sands in Alberta, Canada, to the US Midwest, hooking into existing pipelines that run down to the Gulf of Mexico.

Environmentalists vehemently oppose the project, arguing that it would enable the extraction and use of new sources of oil at a time when the world should be transitioning to low-carbon energy sources.

New medical-research effort

Obama also announced a new personalized-medicine project that will collect genetic and other health data from thousands of volunteers throughout their lives. Its goal is to discover the roots of disease, so that every person can be treated according to his or her particular health risks.

"I want the country that eliminated polio and mapped the human genome to lead a new era of medicine — one that delivers the right treatment at the right time," Obama said, announcing the programme, called the Precision Medicine Initiative. It will be led by the White House, and is likely to involve the US National Institutes of Health (NIH), other government agencies and private companies.

Although few details are available, the proposal seems to be similar to a plan floated in recent months by a bipartisan group of lawmakers in the House of Representatives. The lawmakers are expected to release draft legislation for their plan, the "21st Century Cures" initiative, this month.

Researchers welcomed Obama's move. "A precision-medicine initiative is following us where the science is already taking us," says Margaret Anderson, director of the non-profit organization FasterCures in Washington DC.

"I think the genome's time has come," says Leroy Hood, president of the Institute for Systems Biology in Seattle, Washington. The important thing, he says, will be to integrate genomic information with other health data, such as blood chemistry. "That gives one not only a sense of genetics, but also the environment and how it's changed you."

Whatever form the Precision Medicine Initiative takes, NIH director Francis Collins can expect to face tough questions about whether his agency can pull off such a massive project, particularly after the moribund 100,000-person National Children's Study was cancelled last month. There are also likely to be concerns about the privacy and security of patient data.

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