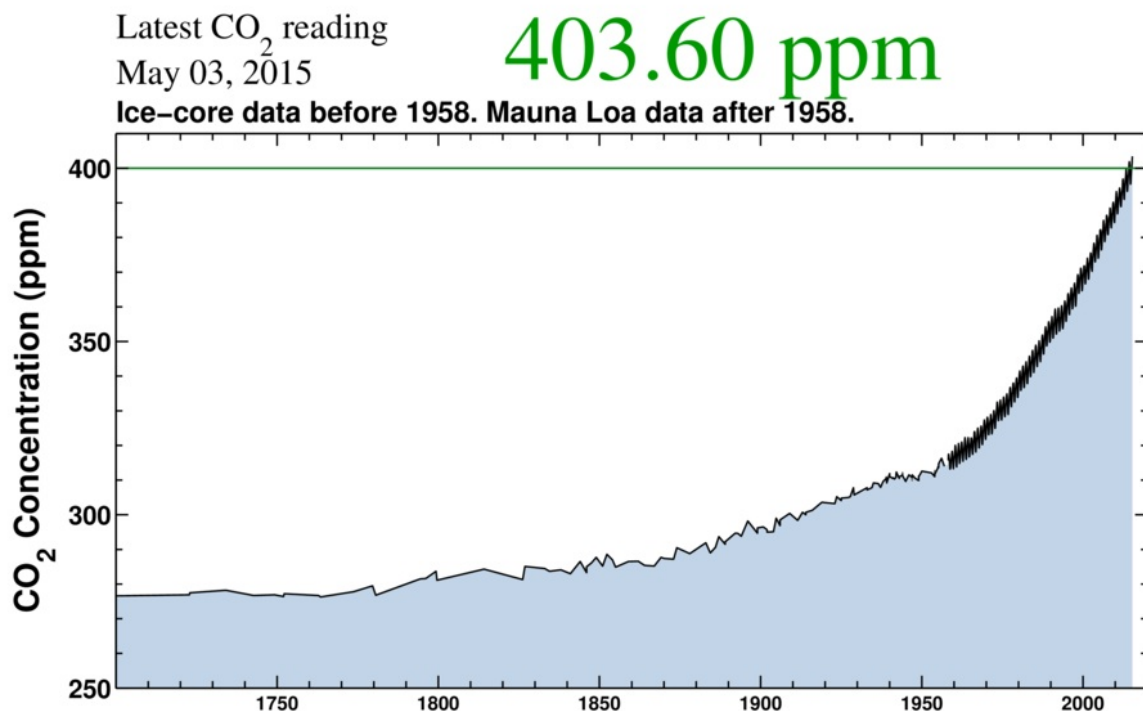




## Climate Change: Clean-Energy Innovation is Essential

May 27, 2015. **Manifiesto por el clima: “Cambiar el clima tiene un precio, ¿quién lo pone? ¿quién lo paga?”** Más de 400 organizaciones españolas se unen contra en cambio climático y presentan la 'Alianza por el Clima'.

May 27, 2015. **La Declaración de Barcelona.** En el marco de la Carbon Expo 2015, fue “presentada ayer por una treintena de empresas españolas, integrantes del denominado Grupo Español de Crecimiento Verde, que es una iniciativa impulsada -el pasado mes de noviembre- por el Ministerio de Agricultura, Alimentación y Medio Ambiente de España. La Declaración de Barcelona incluye diez recomendaciones “para que la economía baja en carbono genere crecimiento y empleo”. La Declaración, firmada por Iberdrola o Gas Natural Fenosa, entre otros, destaca en primer lugar “el potencial de las energías renovables” en España.”



*The Mauna Loa carbon dioxide (CO<sub>2</sub>) record, also known as the “[Keeling Curve](#),” is the world’s longest unbroken record of atmospheric carbon dioxide concentrations. “The number 350 means climate safety: to preserve a livable planet, scientists tell us we must reduce the amount of CO<sub>2</sub> in the atmosphere from its current level of 400 parts per million to below [350 ppm](#)”*

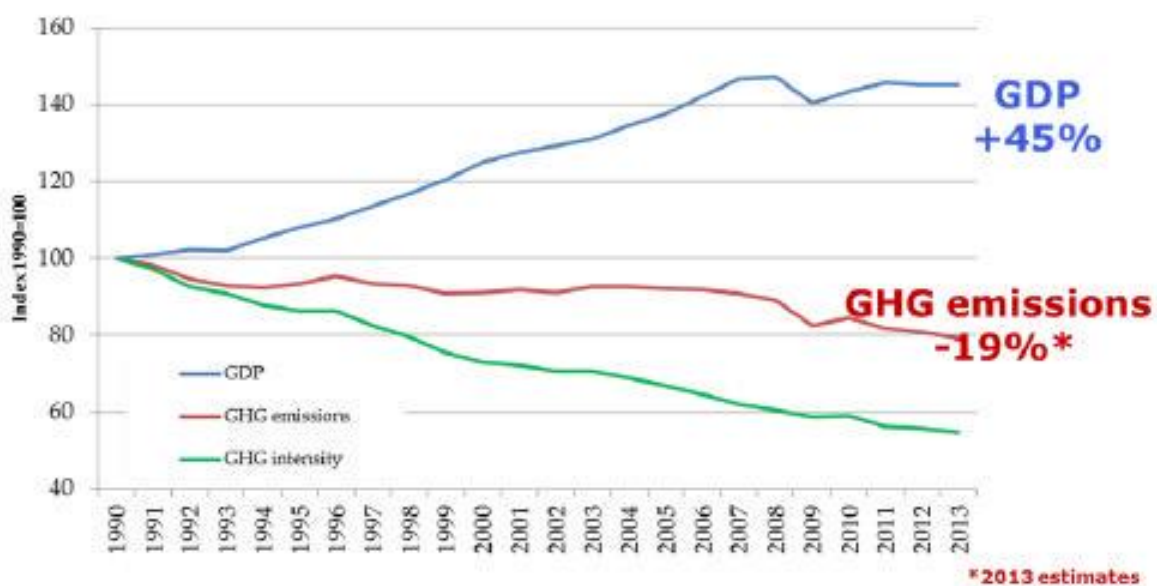
May 22, 2015. **Carbon Expo 2015 diseña la ruta hacia la cumbre del clima de París y un nuevo esquema del carbono.** “Los principales responsables políticos, representantes de empresas, ONG, think tanks e instituciones financieras se reúnen en Barcelona del 26 al 28 de mayo para la duodécima edición de Carbon Expo, la mayor feria y congreso sobre mercados del carbono y finanzas climáticas, para debatir sobre el presente y el futuro de los mercados del carbono antes de la conferencia del clima de París (...) **“Poner precio al carbono** - a través de los mercados de

carbono o impuestos - puede impulsar la inversión hacia una economía más limpia y ayudar a los inversores a identificar tanto los riesgos para sus cadenas de suministro y sus activos, como las oportunidades de negocio derivadas.”

May 22, 2015. [Saudi Arabia's solar-for-oil plan is a ray of hope](#) by Damian Carrington, the Guardian. “Talk by the world’s biggest oil exporter of giving up fossil fuels and embracing solar and wind energy **adds momentum towards a global climate change deal (...)** **“Saudi Arabia is sending a strong signal to all oil producers and companies they must plan for an energy transition,”** said Mark Fulton, former head of climate research at Deutsche Bank and advisor to the Carbon Tracker Initiative (CTI). “If Saudi Arabia is starting to hedge its bets by developing solar capacity, **this could change the fundamentals of the oil market,**” said James Leaton, CTI head of research. But Naimi also said that the idea of keeping most fossil fuels in the ground, as scientists say is necessary to tame climate change (...) **It also adds to the momentum being delivered by the fast-growing, UN-backed, divestment campaign** which argues investors should sell their stocks in fossil fuel companies whose hunger for ever more coal, oil and gas are seen as endangering the climate. Axa, one of the world’s biggest asset managers, announced that it was selling €500m of coal company stocks, by far the biggest divestment so far.”

May 21, 2015. [Kingdom built on oil foresees fossil fuel phase-out this century](#) by Pilita Clark, Financial Times. “**Saudi Arabia, the world’s largest crude exporter, could phase out the use of fossil fuels by the middle of this century, Ali al-Naimi, the kingdom’s oil minister, said.** The statement represents a stunning admission by a nation whose wealth, power and outsize influence in the world are predicated on its vast reserves of crude oil. Mr Naimi, whose comments on oil supply routinely move markets, told a conference in Paris on business and climate change: “In Saudi Arabia, we recognise that eventually, one of these days, we are not going to need fossil fuels. I don’t know when, in 2040, 2050 or thereafter.” **For that reason, he said, the kingdom planned to become a “global power in solar and wind energy” and could start exporting electricity instead of fossil fuels in coming years.**”

**EU cutting Greenhouse Gas emissions while growing the economy**



Source: EEA, DG ECFIN (Ameco database), Eurostat

May 21, 2015. [Global 500 greenhouse gas report: The fossil fuel energy sector](#) by John Moorhead, BSD Consulting, and Tim Nixon, Thomson Reuters. **The greenhouse gas emissions from 32 of the world’s biggest energy companies, which make up nearly a third of global carbon output, had risen** by 1.3% in the period from 2010 to 2013, in marked contrast to scientific recommendations that their carbon should be cut significantly. “The emissions gap is widening. For the recent four-year period for which data is available, from 2010 to 2013, emissions increased by 1.3 percent when they should have been decreasing by 1.4 percent per year. This represents a gap of about 5.5 percent (646 Mio MT CO<sub>2</sub>e) over the four-year time period (...) The companies highlighted in this report have contributed significantly to the welfare of humanity. They have organized massive resources and explored for much-needed energy in the most inhospitable parts of our planet. They have responded to global demand for highly useful energy sources, and have done so using an incredibly successful business model. **Now together, as consumers, regulators, investors and producers, we are at a crossroads**, and we all need to play a part if we are to bring emissions back into line within planetary boundaries. In one sense, consumption begins with consumers; energy companies are only going to produce what consumers will buy. But another **increasingly important role is the part played by the energy sector itself to deploy its considerable political, financial and technical resources for advances in energy innovation** and the related financial and policy frameworks. The authors of this report, in a spirit of constructive transparency, profoundly hope that these shapers of society will show us all a new, prosperous, and at the same time sustainable pathway forward. This is a crucial time for company leadership.”

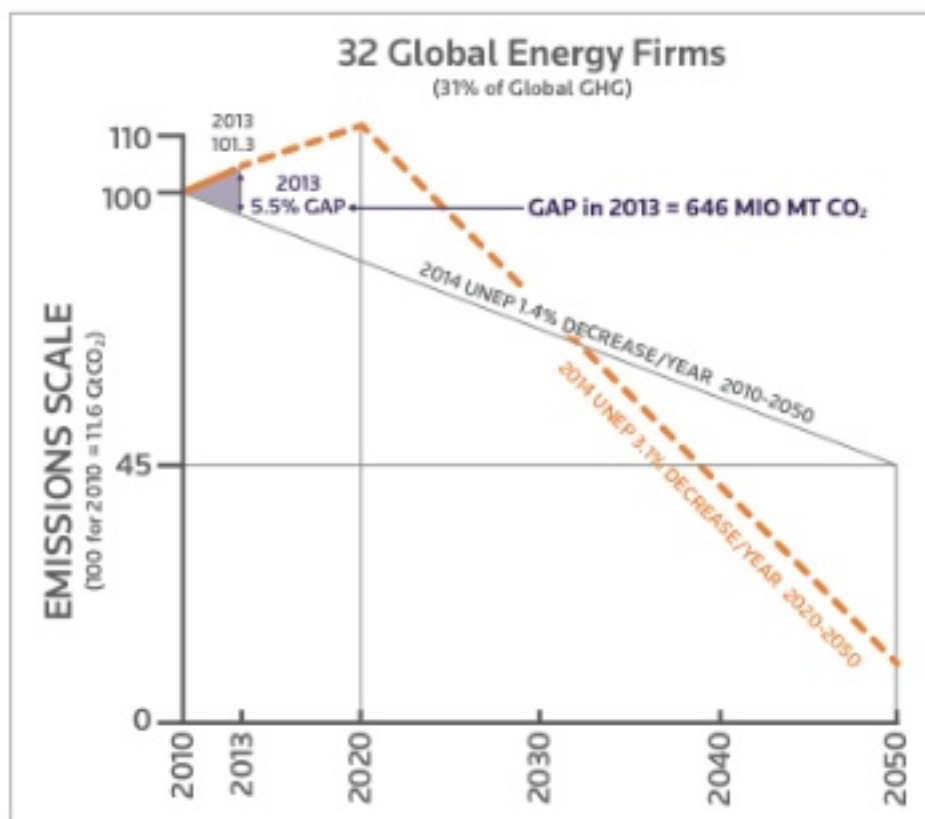


Figure 2. 32 Global Energy Firms

May 21, 2015. [Glencore chairman Tony Hayward calls for an end to subsidies for fossil fuels.](#) **“Former BP boss says subsidies are incompatible with combating climate change and should be eliminated before setting carbon price to curb emissions.** The chairman of the world’s biggest commodity trader has called for an end to subsidies for fossil fuels.”

May 19, 2015. [Renewable Energy Employs 7.7 Million People Worldwide, Says New IRENA Report](#). “Employment in the renewable energy industry increased by more than one million jobs in the last year. This is an 18 per cent increase from last year’s figure of 6.5 million (...) “Renewable energy continues to assert itself as a major global employer, generating strong economic and social benefits worldwide,” said IRENA Director-General Adnan Z. Amin. “This increase is being driven, in part, by declining renewable energy technology costs, which creates more jobs in installation, operations and maintenance. We expect this upward trend to continue as the business case for renewable energy continues to strengthen.” As in previous years, renewable energy employment is shaped by regional shifts, industry realignments, growing competition and advances in technologies and manufacturing processes. **Jobs in the renewable energy sector are increasingly being created in Asia**, with five of the 10 countries with the most renewable energy jobs now located in the region (China, India, Indonesia, Japan, and Bangladesh). As a result, even with continued jobs growth, the European Union and the United States now represent 25 per cent of global renewable energy jobs, compared to 31 per cent in 2012. **The 10 countries with the largest renewable energy employment figures are China, Brazil, the United States, India, Germany, Indonesia, Japan, France, Bangladesh and Colombia.**”

The IMF says the cost of fossil fuel subsidies in 2015 will be US\$5.3tn or ...



May 18, 2015. [Fossil fuels subsidised by \\$10m a minute, says IMF](#) by Damian Carrington, The Guardian. “Fossil fuel companies are benefitting from global subsidies of \$5.3tn (£3.4tn) a year, equivalent to \$10m a minute every day, according to a startling new estimate by the International Monetary Fund. **The IMF calls the revelation “shocking” and says the figure is an “extremely robust” estimate of the true cost of fossil fuels. The \$5.3tn subsidy estimated for 2015 is greater than the total health spending of all the world’s governments.** The vast sum is largely due to polluters not paying the costs imposed on governments by the burning of coal, oil and gas. These include the harm caused to local populations by air pollution as well as to people across the globe affected by the floods, droughts and storms being driven by climate change (...) The IMF, one of the world’s most respected financial institutions, said that ending subsidies for fossil fuels would cut global carbon emissions by 20%. That would be a giant step towards taming global warming, an issue on which the world has made little progress to date. ”

May 18, 2015. [How Large Are Global Energy Subsidies?](#) by David Coady, Ian W.H. Parry, Louis Sears, Baoping Shang; International Monetary Fund “This paper provides a comprehensive, updated picture of energy subsidies at the global and regional levels. **It focuses on the broad notion of post-tax energy subsidies**, which arise when consumer prices are below supply costs plus a tax to reflect environmental damage and an additional tax applied to all consumption goods

to raise government revenues. Post-tax energy subsidies are dramatically higher than previously estimated, and are projected to remain high. These subsidies primarily reflect under-pricing from a domestic (rather than global) perspective, so even unilateral price reform is in countries' own interests. The potential fiscal, environmental and welfare impacts of energy subsidy reform are substantial.”

May 18, 2015. [Chris Field: Science is bringing new and creative solutions to climate change](#). “Scientists have made significant progress in understanding the risks and challenges associated with climate change, but they must work together across disciplines and seek innovative solutions to ensure that countries are able to meet broader climate and development goals, says a leading climate researcher ahead of 2015’s largest international climate science conference. **“Science is the foundation for effective action on climate change.** It tells us the risks, the opportunities for building sustainable solutions, and the costs. However, I think the **science needs to move towards solutions,**” said Chris Field, Chair of the scientific committee for the [Our Common Future Under Climate Change conference](#) in Paris, which brings together scientists from across the world to discuss innovative solutions to the huge challenges posed by climate change ahead of December’s UN climate meeting in Paris.”

May 15, 2015. [China, India partner on climate change](#) by Timothy Cama, The Hill. “The leaders of China and India decided to form a united front in the fight against climate change in a rare joint statement from the two countries. **China, the world’s No. 1 greenhouse gas emitter, and India, the No. 3,** said wealthier countries need to help the climate fight by providing the technology, financing and expertise to help developing countries like China and India cut emissions and cope with the effects of global warming (...) **India has been under international pressure to cut its emissions, especially since last year, when the United States and China — the top two emitters — made a joint pledge to take certain steps to stop emissions growth.** Modi has thus far refused to make a commitment, although he has pledged to increase India’s renewable energy use five-fold by 2022. The joint China-India statements said the countries will cooperate in areas like renewable energy, technology and energy efficiency.”

May 4, 2015. [Clean-energy innovation essential to meeting climate goals. With 2-degree target adrift, IEA report calls for tripling public spending on low-carbon technology R&D.](#) A concerted push for clean-energy innovation is the only way the world can meet its climate goals, the International Energy Agency said as it released its flagship energy technology report. The report, [Energy Technology Perspectives 2015](#) (ETP 2015), shows that despite a few recent success stories, clean-energy progress is falling well short of the levels needed to limit the global increase in temperatures to no more than 2 degrees C. Moreover, it will be challenging for the world to meet its climate goals solely through the UN negotiation process that is expected to yield an agreement this December in Paris. That leaves **the development and deployment of new, ground-breaking energy technologies as key to mobilising climate action,** and the report urges policymakers to step up efforts to support them.

May 4, 2015. [The world needs to triple its investments in clean energy innovation](#) by Chris Mooney, Washington Post. The world needs to triple its investments in clean energy research, suggests a [new study](#) by the Paris-based International Energy Agency, if we’re to have a chance of keeping the world below 2 degrees Celsius of warming above pre-industrial levels — a level beyond which truly dangerous climate change might set in (...) **“Public expenditures on energy RD&D have been growing in absolute terms since the late 1990s,”** notes the IEA report, **“their share of total R&D, however, has fallen dramatically from a peak of 11% in 1981 and has remained flat between 3% and 4% since 2000.”**

April 24, 2015. [Why Google halted its research into renewable energy](#) by Brad Plumer, Vox. “It’s

not that Google has given up on renewable energy. Partly it's that they simply weren't on track to achieve their specific goals. But, more interestingly, the project also made the engineers realize that their original clean-energy goal wasn't nearly ambitious enough. The two engineers ultimately concluded that **“Today's renewable energy technologies won't save us.” Clean-energy technology needs to get much, much, much better** — not just so that it's competitive with natural gas and coal, but good enough that everyone will readily start switching over within the next 40 years (...) **There's a long debate about the degree of tech innovation needed to solve climate change”**

November 18, 2014. [What It Would Really Take to Reverse Climate Change](#). Today's renewable energy technologies won't save us. So what will? IEEE Spectrum, Ross Koningstein & David Fork, engineers at Google, who worked together on the bold renewable energy initiative known as RE<C. “As we reflected on the project, we came to the conclusion that even if Google and others had led the way toward a wholesale adoption of renewable energy, that switch would not have resulted in significant reductions of carbon dioxide emissions. Trying to combat climate change exclusively with today's renewable energy technologies simply won't work; we need a fundamentally different approach. So we're issuing a call to action. There's hope to avert disaster if our society takes a hard look at the true scale of the problem and uses that reckoning to shape its priorities.”

**“If global food waste were a country, it would rank third in terms of greenhouse emissions”**

May 25, 2015. [Man who forced French supermarkets to donate food wants to take law global](#) by Kim Willsher, The Guardian. “Arash Derambarsh, a local councillor who kickstarted fight against food waste in his Paris suburb, wants to convince more countries to follow France's example (...) An estimated 7.1m tonnes of food is binned in France each year – 67% of it by consumers, 15% by restaurants and 11% by shops. **The figure for food waste across the EU is 89m tonnes while an estimated 1.3bn tonnes are wasted worldwide.”**

context=

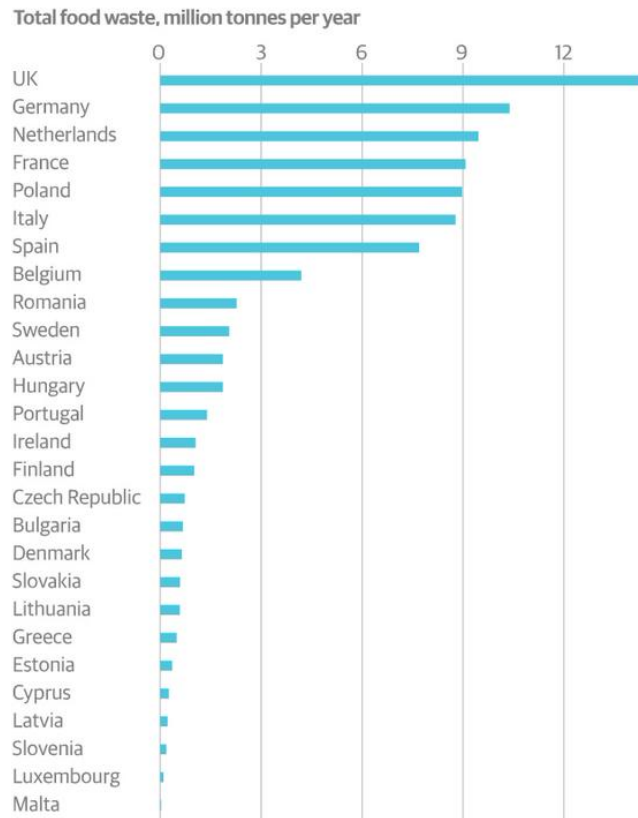
May 22, 2015. [France makes it illegal for supermarkets to destroy edible food in effort to cut waste](#). “ France is making it illegal for large supermarkets to throw away edible food as part of a series of measures to cut down on waste. The country's National Assembly unanimously voted in new laws on Thursday night that will **force chains to donate discarded food to charity or allow it to be turned into animal feed, compost or energy** (...) The move has been welcomed by environmental groups, charities and food organisations, while campaigners are calling for similar laws around the world.”

May 22, 2015. [UK tops chart of EU food waste](#) by Ami Sedghi, The Guardian. “The EU throws away 89m tonnes of food each year – and the **UK is one of the worst offenders**, France's parliament has announced measures to tackle food waste by passing a law banning supermarkets from destroying unsold food. Instead they will be obliged to give it to charities or to put it to other uses. Last year, the House of Lords conducted an inquiry looking at the cost of food waste across the EU. It reported that **an estimated 89m tonnes of food are wasted every year in the EU, which is expected to rise to around 126m tonnes by 2020 if no action is taken**, with significant costs to the environment, economy and society (...) In a 2010 report, the European Commission estimated annual food waste generation in the EU 27 at approximately 179kg per capita, or 89m tonnes. The chart shows how this breaks down by member state.”

context=

May 18, 2015. **Food Waste-To-Energy Technology To Be Piloted In Canary Wharf**. “SEaB Energy has developed a unique, patented, [anaerobic digestion] [micro power plant that turns food and organic waste into heat, energy and water directly on the site of where the waste is produced](#). This generates an attractive revenue stream, eliminates the need to transport food waste to distant processing plants and significantly reduces the site’s carbon footprint. This is becoming critical for new developments, as in order for them to comply with Part L of Building Regulations, their Building Emissions Rate (BER) or Dwelling Emissions Rate (DER), must be less than their Target Emissions Rate (TER). SEaB Energy has been awarded a £50,000 prize alongside the opportunity to implement their technology at Canary Wharf. The award will also kick-start the co-operation with Intel, the event sponsor, that will lead the two companies working together closely to incorporate Intel’s latest technology into SEaB Energy’s products. (...) Sandra Sassow, CEO of SEaB Energy, said: **“Showcasing our game-changing technology, right in the heart of the capital, will allow us to demonstrate to businesses that their waste can be transformed into revenue and carbon offsets, even where space is at a premium.”**”

### Food waste across the EU



May 7, 2015. **New York Is the World's Most Wasteful Megacity, in 3 Charts** by Tanvi Misra, The Atlantic, Citylab. “The city consumes more water and energy, and generates more waste, than any other huge metro (...) It's worth noting that New York is one of the most economically powerful places on the planet, and it's also making strides to improve its resource efficiency. Recently, New York's Mayor Bill de Blasio launched a [10-year plan to reconfigure the city energy use and waste management](#). If it works, the city and its reputation will hopefully both become a bit cleaner.”

context=

March 31, 2015. **Group's Report Aims to Improve New York City's Organic Waste Diversion** by Allan Gerlat, Waste360. “The New York League of Conservation Voters Education Fund (NYCLV) has made recommendations to New York City on how to improve its organic waste diversion. The report from the group provides suggestions on how to increase organic waste processing capacity; find alternatives to waste collection; and create economic incentives to cut waste generation. The environmental education group’s main recommendations include **maximizing use of anaerobic digestion capacity.**”

January 8, 2015. **Another source of natural gas** By [Joanna D. Underwood](#), Times Union. “New Yorkers breathed a collective sigh of relief as they got the news the Cuomo administration would ban high-volume hydraulic fracturing, or fracking. But what will it mean for the state's energy sector? There are modest reserves of conventional natural gas in New York, though production has fallen by more than 50 percent since 2008. So does the state really need its own robust natural gas production, and if not from fracking, could it come from some other source? The answers are "yes" and "yes." In-state energy production would generate jobs and state tax revenue — both badly needed. As industry analysts and fracking boosters point out, a well-developed energy sector has important economic multiplier effects. Of 1,200 billion cubic feet of natural gas consumed in New York annually, barely 2 percent is produced in the state. **With limited conventional gas resources and huge shale gas deposits New York decided not to develop, there is another way to boost gas production: tap our enormous organic waste stream.**”

## **Biomethane has to be a Pillar on European Sustainable Mobility**

October 12, 2015. [European Biomethane Conference](#). “Biomethane is becoming increasingly popular in Europe. In some European countries, significant biomethane markets are emerging, while other countries are in the process of developing promising framework conditions. New processing technologies and innovative processes are ready to be launched on the market and stand as proof of the innovative abilities and dynamics that are at work in this sector. (...) dena’s European Biomethane Conference is **the first European platform dedicated to identifying biomethane trends and prospects in Europe** (...) The conference will be organised by [dena](#), an organisation that has been implementing various projects such as the Biogas Partnership, the Biogas Register and GreenGasGrids, to promote the development of the German and European biomethane markets since 2008.”

June, 2015. [Austria: Zero-Emission-Biomethane-Race](#). “On 17th of June, the first „Zero-Emission-Biomethane-Race“ take place in Rechnitz, Austria. The go-card teams will fight for honor, our environment and for fun! In Austria, approximately 10 billion litres of gasoline and diesel are refueled every year – with upward trend. Hence, CO2 emissions in the transport sector has become an important share. **Biomethane used as fuel can cover an important part of our mobility**. Biomethane is already available and an efficient technology. All significant emissions, compared to conventional fossil fuels, can be reduced significantly.”

May 27, 2015. [Biomethane, the Road to Sustainable Mobility Workshop](#). “European Biogas Association and Natural Gas Vehicle Association Europe in partnership with Fiat Chrysler Automobiles and CNH Industrial. The event gathered main stakeholders in this sector and the key policy officers from the European Commission and European Parliament. Natural gas and renewable energy, specifically CNG (compressed natural Gas) and biomethane, **can play a major role as a vehicle fuel in Europe starting from today**. Among the advantages of CNG and biomethane are that they can help reduce greenhouse gas emissions and improve air quality, help European countries reach the 20-20-20 targets to which they have committed and meet the objective of integrating fuels from renewable sources in transportation.”

May 25, 2015. **Italy will be first european producer of biomethane**. [Biogas, l’Italia è numero uno in Europa 500 imprese pronte a fare il pieno “verde”](#). “**Le nuove direttive per l’utilizzo come carburante del metano non fossile prodotto da rifiuti organici apre un nuovo mercato**. Saremo il primi produttori europei. Nel 2030 coprirà i consumi di un milione di auto. Circa 500 aziende, perlopiù di origine agricola, che fino a ieri creavano energia dalle stalle e oggi si ritrovano a vestire i panni di benzinai da fantascienza. Come in un remake di Ritorno al Futuro: proprio come nel film le auto saranno alimentate da combustibili fatti da scarti e rifiuti.”

May 25, 2015. [Gas Natural Fenosa sigue de gira promocionando el biometano](#). Como ocurrió hace un par de meses en Pamplona, un seminario organizado en Barcelona por la misma entidad, Fundación Gas Natural Fenosa, sirvió para abordar la [situación tecnológica, comercial y normativa del biometano en España](#) (...) El proyecto Life+ METHAmorphosis es liderado por FCC Aqualia y participan Gas Natural Fenosa, FCC, el Área Metropolitana de Barcelona, SEAT y el Institut Català d’Energia (Icaen). El técnico del Área de Gestión Energética de este instituto, Albert Salas, se encargó de presentar un proyecto que propone desarrollar dos innovadores sistemas de tratamiento de residuos sólidos urbanos y porcinos **para generar biometano para vehículos ligeros y pesados**. Salas señaló que “**incorporando los purines a las quince plantas de vertederos existentes en España se generaría biogás vehicular que podría mover una flota de 750.000 vehículos**”. Biorrefinería con biometano Otra de las iniciativas presentadas, tanto por responsables de la Generalitat como por investigadores del Departamento de Química de la Universitat Autònoma de Barcelona, fue la de la **creación de una biorrefinería en Cataluña**.



Desde la nota de prensa se señala que “la planta contaría con varias plataformas químicas que a través de residuos heterogéneos agrarios, forestales, porcinos, urbanos e industriales y con tecnología de co-digestión y pirólisis, generaría biometano que podría inyectarse en la red de gas natural, así como otros biocombustibles y compuestos químicos”.

May 24, 2015. [Shell Eco-Marathon Europe: New track records as the competition celebrates 30 years of innovation and achievement](#). **Fuel efficiency has increased nearly four times since the competition began in 1985.** After months of preparation and four exciting days of competition, the 30th anniversary of Shell Eco-marathon Europe has drawn to a close (...) In 1985 the winning vehicle would have been efficient enough to travel from Rotterdam to London **on just one litre of fuel**. Now, 30 years later, team Microjoule-La Joliverie could travel from Rotterdam to Moscow on the same quantity of fuel with their **2551.8km/l performance in the Prototype CNG category** which was the most efficient result of the competition this year.”

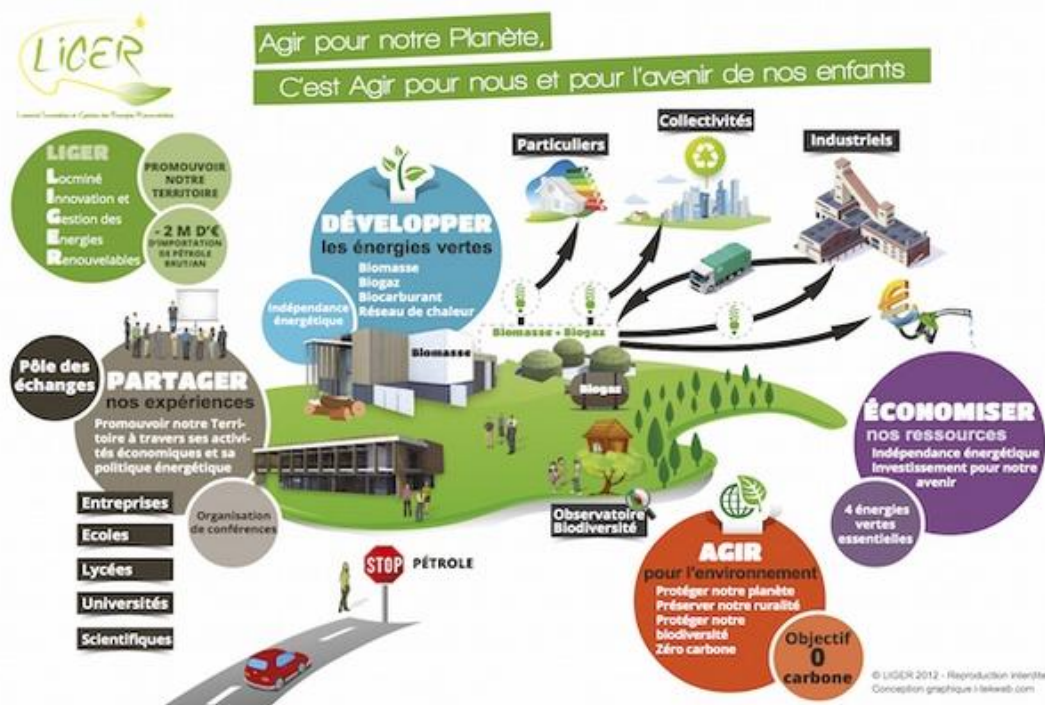
May 22, 2015. [Biogas upgrade using amine absorption](#). “Upgrading of biogas is a necessary step to upgrade biogas to bio methane. This procedure increases the energy content of the gas per volume. Bio methane is then used as vehicle fuel or injected into a gas grid in other countries. The main goal of this report is to design a simple and compact upgrading unit using monoethanolamine (MEA). This unit is then intended as a cost effective solution to methane production for smaller methane producers in Iceland”

May 20, 2015. [Reading Buses 'cow poo bus' sets speed record](#). “A bus powered by cow manure has set a land speed record for a regular bus by driving at 77mph. Reading Buses' "Bus Hound" was recorded doing a lap speed of 76.785mph (123.57km/h) at Bedford's Millbrook Proving Ground. It runs on biomethane compressed natural gas and is painted black and white like a Friesian cow. It normally carries passengers around Reading (...) The bus is normally speed-limited to 56mph (90km/h) ... Chief engineer John Bickerton said the company wanted the "world's first service bus speed record" to **bring to light the viability, power and credibility of buses fuelled by cow poo.**”

May 20, 2015. [Nous avons testé une voiture roulant au Bio GNV](#). Publie par Ouest France. “Ce véhicule roulant au biocarburant servira à approvisionner des flottes d'entreprises, dans un premier temps. Il est commercialisé par la société Liger qui ouvre la première station bretonne de biogaz naturel (...) Nous faisons le plein : **moins de 2 minutes pour injecter les 15 kg de Bio GNV pour 350 km d'autonomie**. Le clapet se ferme tout seul. Facture : 1,23 € le kg. Soit **moins de 19 € pour 350 km**. On interroge le technicien de Liger sur l'entretien. Pas de problème de ce côté-là. «L'entretien est semblable à une voiture à essence, mais la **durée de vie du véhicule est plus élevée**», assure Joël Tanguy. La voiture semble **moins bruyante qu'une automobile à essence et nettement moins qu'un diesel**. Les reprises sont identiques à une voiture classique de même type et le Bio GNV n'affecte aucunement ses capacités mécaniques. Mais une voiture au Bio GNV a d'autres intérêts. **Une carte grise moins chère, voire gratuite, selon les départements. Un coût moins élevé de l'assurance. Aucune contrainte pour se garer dans un parking souterrain. Ceci en dehors d'autres avantages**. Notamment pour les entreprises.” ”

May 20, 2015. [Locminé. La collectivité va rouler sans rejets](#) par Éric Laudrin et Justin Daniel Freeman, Le Télégramme. “**Un carburant « zéro CO2, zéro particules » qui sera vendu aux collectivités et entreprises « en dessous du prix du gasoil »** : c'est ce que propose désormais la société d'économie mixte Liger qui a inauguré, hier, la première station service de bio- gaz naturel. « Nous considérons à Liger (Locminé innovation gestion des énergies renouvelables) que le gaz naturel véhicule (GNV) est, encore plus pour notre région, très productrice de matières organiques, le carburant le plus efficace », a expliqué, hier, Grégoire Super, maire de Locminé et président de la société d'économie mixte, à l'occasion de l'inauguration de la première station bio GNV (...) **Liger**

sera en mesure de fournir l'équivalent de 550.000 litres de gasoil par an." Grégoire Super, Maire de Locminé et Président de la SEM LIGER (Locminé Innovation Gestion des Énergies Renouvelables) conclut que cette station est destinée à amorcer la résolution de l'équation : "pas de station / pas de véhicules et pas de véhicules / pas de stations", bien connue par les acteurs du GNV/bioGNV sous le nom de la problématique de "l'œuf et la poule" .



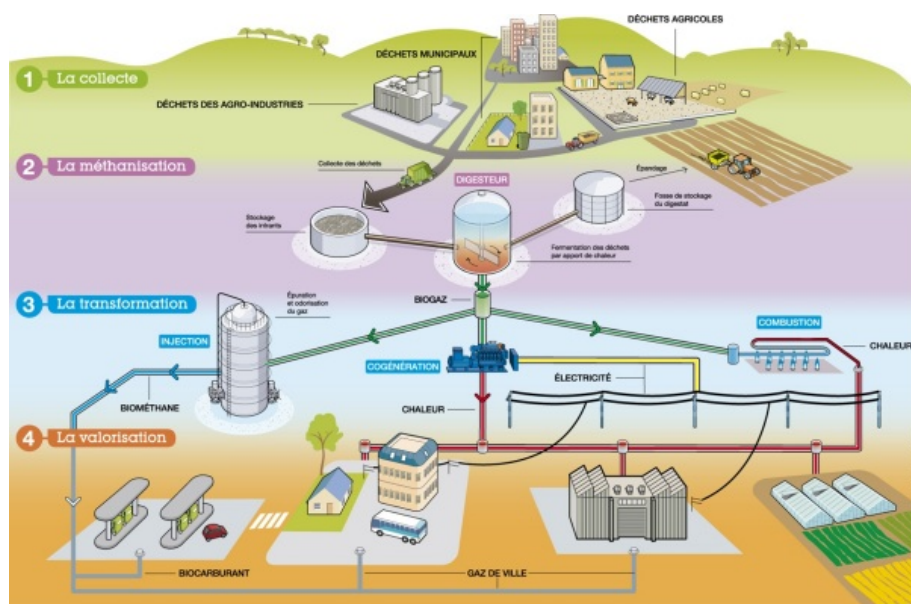
May 20, 2015. [Chine: Le nombre de véhicules GNV pourrait doubler d'ici à 2020.](#) "Selon la société des ingénieurs automobiles de Chine, le pays comptait à fin 2014 4.6 millions de véhicules GNV en circulation et 7000 stations de ravitaillement. « Le nombre de véhicules au gaz pourrait passer à 10.5 – 11 millions d'unité en 2020 dont 400.000 à 500.000 véhicules GNL, soit environ 5 % de l'ensemble des véhicules en circulation » a expliqué Li Yongchang, expert de la société des ingénieurs automobiles de Chine. Egalement amené à augmenter, le nombre de stations GNV devrait passer à 9000 à 10000 points de ravitaillement avec 4000 à 5000 stations GNL pour les transports lourds."

May 19, 2015. [Le bus scolaire GNV à la conquête de l'Amérique: Lion Bus et NGV Motors s'associent pour développer des bus scolaires au GNV](#) "En Amérique du Nord, le constructeur canadien Lion Bus et NGV Motors viennent d'annoncer la conclusion d'un partenariat industriel destiné à développer une offre de bus scolaires alimentés au gaz naturel pour le marché américain (...) Ils ne sont pas parfaits, mais ils sont 95 % moins polluants que les véhicules diesel et moins cher que les véhicules électriques."

May 12, 2015. [Iveco and Iveco Bus CNG Vehicles Provide Clean Services for EXPO Milano 2015.](#) "Expo Milano 2015 is being serviced by 64 logistics vehicles from CNH Industrial N.V.'s Iveco and Iveco Bus brands, many of which are equipped with alternative natural gas engines (...) The vehicles running on natural gas are already very green, and can now also be powered by biomethane, a renewable fuel produced from the biodigestion of biomass, agricultural waste, and the organic fraction of waste (...) New Holland's Sustainable Farm Pavilion is inspired by the brand's Clean Energy Leader strategy and, in particular, its Energy Independent Farm project, which aims to reduce farmers' dependency on fossil fuels and to incentivise the cultivation of bioenergy, such as biomethane. To symbolise the importance of biomethane in agriculture, the new T6 Methane Power tractor – displayed on the pavilion's sloping rooftop to welcome visitors

– is equipped with the same engine range as the methane-powered vehicles provided to Expo by Iveco and Iveco Bus.”

May 10, 2015. [Le développement du biométhane en France, quatre ans après](#). “Le dispositif de soutien à l’injection du biométhane dans les réseaux de gaz naturel a été créé en 2011, puis complété en 2014, en application de la loi Grenelle 2. Cette dernière dispose en effet que « tout producteur de biogaz peut conclure avec un fournisseur de gaz naturel (...) un contrat de vente de biogaz produit sur le territoire national ». Ce dispositif de soutien s’intègre dans la volonté du gouvernement d’accélérer le développement de filières locales de production d’énergies diversifiées permettant une plus grande indépendance énergétique de notre pays.”



Source : Ministère de l'Ecologie, du Développement Durable et de l'Energie

May 8, 2015. [Fossiles : dix raisons de sevrer la planète](#) Isabelle Hanne et Coralie Schaub, Libération. “La dépendance au pétrole, au charbon et au gaz a atteint des niveaux inégalés, menaçant l’environnement et l’économie mondiale. Pourtant, les alternatives existent et sont désormais rentables (...) **le pétrole, remplacé peu à peu par le gaz renouvelable (biogaz, méthanisation) dans les transports automobiles**, serait progressivement limité à l’aviation et aux usages nobles dans la pétrochimie”

May 4, 2015. [Passare da biogas a biometano: un nuovo metodo promette grandi risparmi](#) by Alessandro Codegioni, Qual Energia. “Si tratta di una novità appena annunciata dall’Università di Milano Bicocca: lo «Smart Upgrading», un progetto per la messa a punto di un sistema di purificazione del biogas tutto italiano che offre notevoli risparmi di energia e, quindi, di costo rispetto ai metodi già commercializzati. Il fisico Maurizio Acciari ci spiega come funziona (...) Ma qual è la differenza con i metodi esistenti? Non posso entrare troppo nei dettagli per motivi brevettuali, ma posso dire il nostro è un sistema a lavaggio dei fumi, che invece di utilizzare soluzioni acquose di ammine, impiega liquidi ionici. I liquidi ionici sono sostanze, per lo più organiche, liquide a temperatura ambiente, che contengono ioni, come le soluzioni di acqua e sali, ma senza bisogno di un solvente. Ne esiste una gamma vastissima, ognuna con caratteristiche diverse, e in questa gamma noi abbiamo identificato i più adatti all’assorbimento di CO<sub>2</sub>, modificandoli per ottimizzarli per questo scopo.”

April 30, 2015. [City in Colorado Fueling Vehicles with Biogas Produced from Wastewater Treatment Facility](#). “With more than 260 million registered vehicles and commercial trucks on

U.S. roads, it's no surprise **transportation accounts for 67% of America's total petroleum use**. Since growth is expected to continue in this area, it's more critical than ever for the commercial, industrial and private/public sectors to explore innovative methods for reducing our dependence on oil. Grand Junction, Colo., is setting an example for other cities to follow in capitalizing on resources to create alternative fuels. With a grant from the Colorado Department of Local Affairs and seed funding from the Energy Department's State Energy Program, Grand Junction and partners built a 5-mile underground pipeline to transport compressed natural gas (CNG) from a local wastewater treatment facility to a CNG station. The biogas produced at the facility, which was once flared off, is now being converted to CNG to fuel 37 city-owned fleets and county-owned buses (...) Grand Junction held a celebration last week on Earth Day to commemorate the completion of **one of the first CNG project of its kind in the U.S.**"

## Responsible Research and Innovation Challenge

April 29, 2015. [«El mayor reto cultural es motivar a las instituciones para que introduzcan la RRI en sus planes estratégicos»](#) Entrevista a Ignasi López Verdeguer, coordinador del proyecto RRI Tools y director del Departamento de Ciencia de la Obra Social "la Caixa", por Ralf Schreck, LabTimes "(...) **¿Qué objetivos se han conseguido hasta ahora?** En la primera fase de análisis se ha realizado la consulta paneuropea sobre RRI más importante hecha hasta la fecha: han participado 420 instituciones a través de 27 talleres organizados en 23 países para detectar las motivaciones y los obstáculos más importantes para la RRI. [Las conclusiones se han recopilado y analizado en un documento](#) del University College London (...) **¿Qué experiencia ha tenido hasta ahora con los diferentes públicos objetivos?** Entre las sorpresas interesantes que hemos tenido hasta ahora destacan las oportunidades que mucha gente anticipa al involucrar a un público más amplio en los procesos de I+D: la posibilidad de mejorar la capacidad de innovación y de descubrir nuevos mercados, la potenciación de una relación más democrática entre la ciencia y la sociedad, la identificación de nuevas preguntas de investigación a problemas que hasta ahora no se han tenido en cuenta, el empoderamiento de los ciudadanos para su participación activa en la sociedad del conocimiento, etc. Pero también hay algunos obstáculos: hay cierta tendencia de las diferentes partes a considerar que la responsabilidad de la RRI recae en las otras, no está claro sobre quién debería financiar las actividades, la evaluación de los investigadores no suele valorar estas cuestiones, ¡todavía queda mucho por hacer! (...) **¿Se incluyen también ejemplos de mejores prácticas en RRI de países no europeos? ¿En qué punto se encuentra Europa en comparación con otros países como Estados Unidos?** Se está llevando a cabo una selección de prácticas inspiradoras y se pueden encontrar en cualquier parte del mundo. Por ejemplo, el apoyo al "desarrollo responsable de nanotecnología" es uno de los éxitos más importantes de la Iniciativa Nacional de Nanotecnología (NNI) de EEUU y a menudo se muestra como un ejemplo a tener en cuenta. Podemos encontrar otros ejemplos en la India y en Brasil, ligeramente distintos, pero con planteamientos similares. De todas maneras, seguramente no hay en ningún otro sitio una iniciativa política tan potente y transversal para impulsar la RRI como la de Europa a través de Horizonte 2020 (...) **¿Cuáles son los principales retos futuros de la RRI?** Últimamente, la RRI ha recibido cierto impulso político desde la aprobación, por parte del Consejo de Competitividad, de la [Declaración de Roma](#). Un grupo de fundaciones privadas de investigación, entre ellas la Obra Social "la Caixa" han lanzado recientemente una [declaración de apoyo a la RRI](#). También algunos consejos de investigación como el EPSRC británico o holandés NWO tienen programas específicos de RRI. Pero todavía quedan muchos retos por asumir, como la falta de conocimiento generalizada del concepto a través del espacio europeo de investigación, la falta de material formativo, etc. Aunque seguramente el reto cultural más importante es motivar a las instituciones para que introduzcan la RRI en sus planes estratégicos y la pongan en práctica. Los cambios institucionales requieren tiempo y esfuerzo, desde RRI Tools esperamos contribuir a facilitar el proceso. "