

# USING THE 'Y' CLASS TO FIND 'GREEN' PATENTS

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People around the world are concerned about climate change and many new ideas have emerged from these concerns to prevent it and to provide sustainable energy in new ways.

As a result, according to the EPO, there have been around 1.5 million patent applications that either are explicitly concerned with inventions linked to sustainable energy, or mention it.

Searching for patent documents relating to sustainable energy has, therefore, often been a challenge, especially because in the past documents relating to sustainable technologies did not fall into one single classification.

Now, however, faster searches for sustainable technology inventions should be possible. That's because of the Cooperative Patent Classification system (CPC), which is an extension of the International Patent Classification system (IPC) and has been used by the EPO and the US Patent and Trademark Office (USPTO) since January 2013.

The CPC replaced the European Classification (ECLA) scheme and contains some 250,000 classification symbols, one of which, the 'Y' classification, relates to sustainable energy.

The 'Y' class is itself divided into subclasses to further help the user narrow down the search, and the EPO has produced a leaflet, *Finding sustainable technologies in patents*, to help search the 'Y' class and reduce the number of hits to make clearer where and what kind of sustainable energy and technology inventions can be protected by patents.

Sustainable technologies in the 'Y' classification include:

- **Y02B** Climate change mitigation technologies in buildings, including the residential sector.
- **Y02C** Greenhouse gases capture and storage, including CO<sub>2</sub> capture and storage.
- **Y02E** Climate change mitigation technologies in energy generation, transmission and distribution, including renewable energy, efficient combustion, biofuels, efficient transmission and distribution, energy storage, and hydrogen technology.
- **Y02T** Climate change mitigation technologies in the transportation of goods and persons, eg, hybrid vehicles.
- **Y04S** Smart grid technologies, including hybrid vehicles interoperability.

The 'Y' classification makes it much easier to continue to be updated about recent efforts and approaches to improving sustainable energy.

Inventions relating to sustainable energy must, however, comply with the European Patent Convention (EPC). They still need to be novel, and possess an inventive step, as well as being industrially applicable. Applicants having issued US patents may face problems getting a similar patent granted at the EPO.

“THE 'Y' CLASSIFICATION MAKES IT MUCH EASIER FOR PATENT DRAFTERS TO CONTINUE TO BE UPDATED ABOUT RECENT EFFORTS AND APPROACHES TO IMPROVING SUSTAINABLE ENERGY.”

Moreover, Article 52(2) EPC defines a non-exhaustive list of “non-inventions” within the EPC. The list of non-inventions includes:

- Discoveries, scientific theories and mathematical methods;
- Aesthetic creations;
- Schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers; and
- Presentations of information.

Many developments relating to aspects of sustainable energy will be in one or more of these groups of non-inventions, whereas other creations possessing a more technical character will be seen as true inventions.

True sustainable energy inventions within the EPC could concern a smart electricity grid or solar-energy technology, solar cells or windmills, for instance.

More abstract inventions, for example for carbon emission estimation schemes, such as buying and selling CO<sub>2</sub>, are likely to be problematic because they might well fall into one of the above exclusion classes. It would therefore be difficult to receive a European patent for such an invention unless technical features are also part of the concept.

This is reflected in a simple search for the term “carbon footprint”. At the time of writing, this gave 268 hits on the publicly accessible Espacenet database provided by the EPO. Although the hits also included patent documents remotely mentioning “carbon footprint”, it is worth noting that out of these 268 hits only 11 were European applications, whereas there were 104 US patent applications.

It is hoped that the 'Y' classification will inspire patent drafters to obtain information on successful sustainable energy patents issued by the EPO so they can better evaluate which features are deemed to have sufficient technical character, and to what extent these features need to be included in claims.

More information of the CPC and the 'Y' class can be found at the EPO web page: [www.epo.org/news-issues/issues/sustainable-technologies.html](http://www.epo.org/news-issues/issues/sustainable-technologies.html) ■

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