

**System and method for efficiently using excess electrical
energy**

Abstract:

A plant having a first device for the preparation of ethyne
5 by partial oxidation of at least one hydrocarbon,
generating a first ethyne-containing product gas stream,
having a second device for the electrothermal preparation
of ethyne, generating a second ethyne-containing product
gas stream, and having a separating device for separating
10 ethyne from a gas stream, to which both the first and the
second product gas streams are fed, can make efficient use
of excess electrical energy by operating the device for the
electrothermal preparation of ethyne with excess electrical
energy.