

## Frequently Asked Questions

### Question

Economy Mode

### Answer

Economy mode can be frustrating but is there to preserve battery life and stop it draining.

### From Citroens Technical Guide:

#### Consumption mode : "nominal" or "economy"

#### In nominal mode all the electrical functions are authorised .

If the alternator operational information has been present for less than 2 minutes and 30 seconds, the nominal mode remains active for a timing of 5 minutes .

If the alternator operational information has been present for more than 2 minutes and 30 seconds, the nominal mode remains active for double the alternator operating time and at the most for 30 minutes .

**Example** : to have a timing in nominal mode of 30 minutes, the alternator must have been operational for 15 minutes

#### ?Conditions for change to economy mode

Vehicle stopped or ignition key removed > The 30 minutes timer starts counting down only if the so-called reawakening or retaining functions are active

Ignition on > The 30 minute timed period is counted down independently of the reawakening functions or permanent functions

**The "economy" consumption mode is available only when the alternator is not operating (engine not running) .**

Economy mode prevents the battery from discharging when the engine is not running .

The non-permanent electrical functions are deactivated whatever the position of the ignition key .

Only certain permanent functions and some of the permanent requested locked functions are authorised in economy mode .



N.B. : A permanent function keeps operating even in the absence of the user .

N.B. : A permanent function requested locked keeps operating as long as the command is maintained .

**Permanent functions authorised in economy mode :**

???? Hazard warning lamps

???? Alarm

???? Central locking

**Permanent requested locked functions authorised in economy mode :**

???? Horn

???? Indicators

???? Headlamp flash

**Passing from economy mode to nominal mode**

Customer mode > Only if alternator operational or engine running information appears

Factory mode > Nominal mode can be activated by the diagnostic tool for a determined time or until it is stopped by the operator.

When the engine running information appears at the BSI 1 . there is return to economy mode as soon as the engine running information disappears

**I've over simplified it as the Battery charge status control unit is very complex:**

The main function of the battery charge status control unit (BECB) is to calculate the battery charge status, from measured (voltage, current) and calculated (battery internal temperature) physical parameters, then to transmit this information to the built-in systems interface to refine the activation of the energy economy mode .

The battery charge status control unit (BECB) incorporates an autodiagnosics function which returns any faults detected on the sensors and/or the internal electronics of the control unit .

The battery charge status control unit (BECB) has a role which permits optimisation of the management of the electrical energy .

When the generator is operating, the battery charge status control unit (BECB) permits optimisation of the load shedding strategies and when the generator is not operating, it permits provision of the comfort services (manual raising/lowering function, secondary inflation, maintaining of a comfortable temperature in particular) .

**The battery charge status control unit :**



Monitors the battery voltage in the off and ignition on statuses

Monitors the battery current in the off and ignition on statuses

Monitors the battery temperature in the off and ignition on statuses

Determines the battery charge status on the off and ignition on statuses

Determines the battery health status in the off and ignition on statuses

Informs the BSI 1 of an insufficient battery charge status

Informs the BSI 1 of a critical battery health status

The battery status sensor is supplied by a protected permanent battery+ supply .

The battery status information is available and distributed by the battery status sensor at the request of the built-in systems interface during the following life phases :

At the wake-up of the BSI 1 alone

At the partial and main wake-up of the IS CAN

At the wake-up of the COMFORT CAN or BODY CAN

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**C6 Specific Technical Details - Consumption mode : "nominal" or "economy"**

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**Economy mode**

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**Permanent functions authorised in economy mode:**Hazard warning lamps

Alarm

Central locking

Permanent requested locked functions authorised in economy mode :

Horn

Indicators

Headlamp flash

**Passing from nominal mode to economy mode**

**Passing from economy mode to nominal mode**

**Loading / cut-off of the electrical network** Load acquiring and load shedding are only available in the alternator operational or engine running status

In order to determine the level of load shedding, the built-in systems interface (BSI 1) uses the following information

**Position of the ignition key (ignition off, starting)** Exterior temperature

Battery voltage

Customer/factory configuration

**Load acquiring** Load acquiring allows the engine temperature to rise more rapidly in order to favour regeneration of the particle filter on diesel vehicles

By increasing the alternator's resistance torque, the torque of the combustion engine also increases, as does the temperature of the combustion engine .

The BSI 1 receives a load-acquiring request from the engine ECU via the CAN network

**N.B** In the reactivation situation, no information on activation of consumers is given to the driver

**N.B** In show-room or factory configuration the load acquiring is inactive

**N.B** The activation of the heated seats option comes into the load acquiring process .

(#) CTP : additional heater elements

**N.B** In the show-room or factory modes, the load acquiring is inactive .

**Vehicle configuration: factory, park, customer and show-room mode** **Factory mode** This configuration is used only while the vehicle is being manufactured .

The factory mode permits adaptation of the life phases of the functions to the requirements of the vehicle manufacturing process while limiting electrical consumption .

This configuration permits tests of single items and a reduction in electrical consumption from the battery .

Factory configuration reduces electrical consumption from the battery .

The factory mode reduces electrical consumption by forcing the default economy mode .

The return from factory mode to customer mode is carried out by configuration .

**Park mode (BSI 1)** This configuration is used for the storing of the vehicle on a park .

It permits cutting off of the permanent BATT+ supply to certain electrical energy consumers so limiting electrical consumption to guarantee starting of the vehicle .

The shunt which supplies the permanent BATT+ consumers is removed in favour of a fuse to supply the consumers with ignition+ .

The "park shunt" configuration permits access to the vehicle (the door and tailgate locks are operational) .

**Customer mode** This is the vehicle's functioning mode when it is handed over to the customer .

The customer mode corresponds to the nominal real life situation of use of the vehicle .

The customer mode is active after the following actions have been carried out :

Activation of the customer mode via the diagnostic tool, on the BSI1 operating mode menu

Changing of the park shunt to the customer position on the built-in systems interface



**Show-room mode** In this mode, the vehicle is connected to an external supply and does not require an ignition key .

The show-room mode permits static presentation of the vehicle for display, while retaining certain functions which are available with the engine running :

- Instrument panel lighting
- Multifunction screen lighting
- Boot illumination
- Locking of the doors using the key

In show-room mode, the "economy mode" energy consumption mode is deactivated and the networks are kept awake .

The show-room mode is active after the following actions have been carried out (#) :

- Carrying out of the preliminary operations for switching to show-room mode
- Activation of the show-room mode, via the diagnostic tool, on the BSI1 operating mode menu
- Fitting of the special "show-room" harness

Operations in addition to fitting the special "show-room" harness

(#) refer to the static presentation of the vehicle and installation of the special show-room electrical harness document

So it isn't random but pre programmed in. That's not to say like any software, it can't have a bug

The moral seems to be check your battery first - any thing less than perfect means Economy Mode will kick in in seconds.

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### **Details**

*Info 07 October 2009 by C6Dave*