



solar power generation for self-use and surplus energy storage

Self-consumption surpluses Learn how to manage solar self-consumption surpluses through grid feed-in and battery storage. Discover how to cut energy bills by up to 70% and boost renewable energy use. What is Solar Self-Consumption? Tips to Maximize Solar self-consumption allows households and businesses to directly use the energy generated by their solar panels, reducing dependence on the grid. This article will explain what solar self-consumption is, Solar Integration: Solar Energy and Storage BasicsWhat Is Energy Storage?Advantages of Combining Storage and SolarTypes of Energy StoragePumped-Storage HydropowerElectrochemical StorageThermal Energy StorageFlywheel StorageCompressed Air StorageSolar FuelsVirtual StorageSolar power can be used to create new fuels that can be combusted (burned) or consumed to provide energy, effectively storing the solar energy in the chemical bonds. Among the possible fuels researchers are examining are hydrogen, produced by separating it from the oxygen in water, and methane, produced by combining hydrogen and carbon dioxide. MetSee more on energy.gov#b_results

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.b_vidAns{border-radius:6px;box-shadow:0 0 0 1px rgba(0,0,0,.05);padding:16px 20px;gap:10px;background:#fff}@charset "UTF-8";#b_results .b_ans.b_vidAns{box-shadow:none!important;padding:var(--smtc-gap-between-content-medium) 0!important;background:var(--bing-smtc-background-ctrl-fade-on-image-stop-0)}#b_results .b_ans.b_vidAns #serpvidans.vsacf .mc_vtvc,#b_results .b_ans.b_vidAns #serpvidans.vsacf .mc_vtvc_th,#b_results .b_ans.b_vidAns #serpvidans.vsacf .cico,#b_results .b_ans.b_vidAns #serpvidans.vsacf .mc_vtvc_htb,#b_results .b_ans.b_vidAns #serpvidans.vsacf .vrhc,#b_results .b_ans.b_vidAns #serpvidans.vsacf .vrhcp,#b_results .b_ans.b_vidAns #serpvidans.vsacf .vrhtc,#b_results .b_ans.b_vidAns #serpvidans.vsacf .vrhtpc{border-radius:var(--mai-smtc-corner-list-card-nested-default)}#b_results .b_ans.b_vidAns #serpvidans.vsacf .mmlist .mc_vtvc,#b_results .b_ans.b_vidAns #serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta{margin:0}#b_results .b_ans.b_vidAns #serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_channel,#b_results .b_ans.b_vidAns #serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_row_channel{color:var(--smtc-foreground-content-neutral-primary)}#serpvidans.vsacf,#serpvidans.vsacf .expctn .expbody,#serpvidans.vsacf .mmlist {display:flex;flex-direction:column;gap:var(--smtc-gap-between-content-medium)}#serpvidans.vsacf .cico{height:auto}#serpvidans.vsacf .mc_vtvc_ban_lo{top:0;right:auto}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta{height:auto;padding:var(--smtc-gap-between-content-xx-small) 0 var(--smtc-gap-between-content-xx-small) var(--smtc-gap-between-content-medium);display:flex;flex-direction:column;justify-content:space-between}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_title,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_title{color:var(--smtc-ctrl-link-foreground-brand-rest);font:var(--bing-smtc-text-global-body2);height:auto;display:-webkit-box;-webkit-line-clamp:2;-webkit-box-orient:vertical}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area,#serpvidans.vsacf .mc_cwvc
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.mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block,#serpvidans.vsacf .mmlist .mc_vtvc
.mc_vtvc_meta .mc_vtvc_meta_block_area,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta .
mc_vtvc_meta_block{display:flex;flex-direction:column;gap:var(--smtc-padding-ctrl-text-
side)}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area
.mc_vtvc_meta_row,#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block
.mc_vtvc_meta_row,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area .mc_vtvc_meta_row,#serpvidans.vsacf .mmlist .mc_vtvc
.mc_vtvc_meta .mc_vtvc_meta_block .mc_vtvc_meta_row{color:var(--smtc-foreground-content-n
eutral-primary);height:var(--mai-smtc-padding-card-default);font:var(--bing-smtc-text-global-
caption1)}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area
.mc_vtvc_meta_row .mc_vtvc_meta_row_channel::before,#serpvidans.vsacf .mc_cwvc .mc_vtvc
.mc_vtvc_meta .mc_vtvc_meta_block .mc_vtvc_meta_row
.mc_vtvc_meta_row_channel::before,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area .mc_vtvc_meta_row
.mc_vtvc_meta_row_channel::before,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block .mc_vtvc_meta_row .mc_vtvc_meta_row_channel::before{content:" "
"}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area
.mc_vtvc_meta_pubdate,#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block .mc_vtvc_meta_pubdate,#serpvidans.vsacf .mmlist .mc_vtvc
.mc_vtvc_meta .mc_vtvc_meta_block_area .mc_vtvc_meta_pubdate,#serpvidans.vsacf .mmlist
.mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block .mc_vtvc_meta_pubdate{color:var(--bing-smtc-
foreground-content-neutral-tertiary);padding-bottom:0}.vsacf .mc_cwvc .mc_vtvc_con_rc,.vsacf
.mmlist .mc_vtvc_con_rc{display:flex}.vsacf .mc_cwvc .mc_vtvc_con_rc
.mc_vtvc_meta_w,.vsacf .mmlist .mc_vtvc_con_rc .mc_vtvc_meta_w{height:auto}.vsacf
.b_title{padding-left:var(--mai-smtc-padding-card-default)}.vsacf .b_title .mmtitle{font:var(--bing-
smtc-text-global-subtitle1-strong);margin-bottom:0}.vsacf .b_title .mmtitle
a::after{content:"";margin:5px 5px 0 0;border-top:2px solid var(--smtc-foreground-content-neutral-
primary);border-right:2px solid var(--smtc-foreground-content-neutral-primary);background-
size:7px 7px;width:7px;height:7px;transform:rotate(45deg);display:inline-block;margin-
left:4px}#serpvidans.vsacf .b_title .mmtitle{margin-bottom:0}#serpvidans.vsacf .b_title .mmtitle
a{color:var(--smtc-foreground-content-neutral-primary)}#serpvidans.vsacf .cardless.mmlist
.mc_vtvc_con_rc,#serpvidans.vsacf .cardless.mmlist .mc_vtvc_th{height:auto}#serpvidans.vsacf
.vsb_tr_c.va_tt{margin:0}#serpvidans.vsacf .vtbc .mv_vtvc_play,#serpvidans.vsacf .vtbc
.mv_vtvc_play_ext{position:static}#serpvidans.vsacf .va_tt
.mc_vtvc_ban_lo{display:block}#serpvidans.vsacf .mc_bc{width:auto;border-radius:var(--smtc-
ctrl-badge-sm-corner);padding:var(--smtc-padding-ctrl-text-side) var(--smtc-gap-between-content-
xx-small)}#serpvidans.vsacf .rmts .mc_bc ems{display:none}#serpvidans.vsacf
a.vsb_tr_t{color:var(--smtc-foreground-content-neutral-primary)}.vsacf .va_tt .vsb_tr_chd
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.mc_vtvc_th_dock.rmoverlay{height:36px}.vsacf .va_tt .vsb_tr_chd .mc_vtvc_th_dock{height:92px;background:linear-gradient(180deg,var(--bing-smtc-background-ctrl-fade-on-image-stop-0) 0%,var(--mai-smtc-background-ctrl-on-image-rest) 100%)}.vsacf .va_tt .vsb_tr_t{padding:0 var(--mai-smtc-padding-card-default);font:var(--acf-font-title-2-strong)}.vsacf .va_tt .vsb_tr_chd .mc_vtvc .mc_vtvc_meta,.vsacf .va_tt .vsb_tr_chd .mc_vtvc .mc_vtvc_title{color:var(--mai-smtc-foreground-ctrl-on-image-rest)}.vsacf span.vcmt_ctt{font:var(--bing-smtc-text-global-caption2);margin:var(--smtc-gap-between-content-xx-small) 0 0;height:16px}#serpvidans.vsaf .vsb_tr_chd .mc_vtvc_tot .mc_vtvc_title strong{font-size:14px;line-height:20px;display:unset}#serpvidans.vsaf .va_tt .b_sldrp .slide:not(:first-child){margin-left:var(--smtc-gap-between-content-small)}#serpvidans.vsaf .va_tt .vsb_tr_chd .mc_vtvc .mc_vtvc_title{white-space:normal;display:-webkit-box;-webkit-line-clamp:2;-webkit-box-orient:vertical}#serpvidans.vsaf .b_module_expansion_control .b_btnContainer .b_CompactExpansion{background-color:var(--bing-smtc-background-ctrl-neutral-rest);display:flex;justify-content:center;align-items:center;gap:4px;width:fit-content;height:auto;padding:8px 12px}#serpvidans.vsaf .b_module_expansion_control .b_btnContainer .b_CompactExpansion .b_CompactExpansionBtnText{font:var(--bing-smtc-text-global-caption1-strong);color:var(--bing-smtc-foreground-content-brand-rest)}#serpvidans.vsaf .b_module_expansion_control .b_btnContainer .b_CompactExpansion .b_arrow{display:flex;margin:0;height:auto}#serpvidans.vsaf .b_module_expansion_control .b_btnContainer .b_CompactExpansion .b_arrow path#Shape{fill:var(--bing-smtc-foreground-content-brand-rest)}#serpvidans.vsaf .b_module_expansion_control .b_btnContainer::after{content:"";position:absolute;width:100%;bottom:20px;left:0;height:1px;border-radius:1px;background:var(--smtc-stroke-ctrl-on-neutral-rest)}#b_results .b_ans.b_vidAns{box-shadow:none;padding:12px 20px 0}#b_results .b_ans.b_vidAns .vasa{padding:bottom:0}#b_results .b_ans.b_vidAns .cardless .salink{margin:0}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc{margin-top:10px}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta{display:flex;flex-direction:column;justify-content:space-between;margin:0 10px 4px 12px}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_channel{color:#111}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_row_channel,#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area{color:#666}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area{bottom:0;height:unset}.b_dark .vasa.cardless .mc_vtvc{background-color:unset}.mmtitle>a{display:block}.mc_fh{height:100%;border-radius:6px}.mc_tc_bs{overflow:hidden}.mmlist .mc_vtvc .mc_vtvc_meta { padding: 12px 16px 16px 16px; } .mmlist .mc_vtvc .mc_vtvc_meta_w { height: 112px; margin-top: -0px; } .mmlist .mc_vtvc .mc_vtvc_title { height: 44px; line-height: 22px; margin-bottom: 0px; margin-top: 0px; } .mmlist .mc_vtvc .mc_vtvc_meta_block_area { height: 40px; } .mmlist .mc_vtvc .vtmu, .mmlist
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.mc_vtvc .vtpl { bottom: 120px; } .mmlist .mc_vtvc_th_dock { height: 112px; } .mmlist
.mc_vtvc_th .cico { height: 131px; } .mc_vtvc{background-color:#fff;box-shadow:0 0 0 1px rgba(
0,0,0,.05);line-height:0;margin:0;position:relative;border-radius:6px;overflow:hidden}.mc_vtvc.no
shadow{box-shadow:none}.mc_vtvc_con_rc{border-radius:6px;overflow:hidden;position:relative
}.mc_vtvc>a{color:#71777d;display:block;text-
decoration:none;width:100%}.mc_vtvc>a:focus::after{outline:2px solid #00a89d;width:100%;hei
ght:100%;content:"";outline-offset:-2px;position:absolute;top:0;left:0}.mc_vtvc_th{background-
color:#d5d5d5;position:relative}.mc_vtvc_th .cico{border-radius:0}.mc_vtvc_ban_lo,.mc_vtvc_ba
n_up{position:absolute;vertical-align:middle}.mc_vtvc_ban_lo{bottom:0}.mc_vtvc_ban_up{top:0
}.mc_vtvc_title{font-weight:normal;margin-
bottom:11px;overflow:hidden;color:#111;height:54px;line-height:18px}.mc_vtvc_title
a{display:inline-block;color:#111}.mc_vtvc_title a:hover{text-decoration:underline}.mc_vtvc_src
_ico{float:left;margin-right:4px}.mc_vtvc_act{height:16px;margin-top:-40px;padding:12px 8px;z
-index:1}.mc_vtvc_actc{right:16px;bottom:16px;position:absolute;display:inline-block;z-
index:1}.mc_vtvc_act_sep{border-top:1px solid #d5d5d5;height:40px;margin:0 8px}.mc_vtvc_fh
.mc_vtvc_act_sep,.mc_vtvc_fh .mc_vtvc_act{visibility:hidden}#serpvidans .b_topTitle{margin-b
ottom:8px}.mc_vtvc_htc{ width:100%;height:100%;position:absolute;top:0;bottom:0;left:0;right:0
}.mc_vtvc_htb{ width:100%;height:100%;background:rgba(0,0,0,.7);position:absolute;top:0;botto
m:0;left:0;right:0}.mc_vtvc_ht{ width:100%;padding:0 16px;line-height:16px;color:#fff;text-decor
ation:underline;word-break:break-word;box-sizing:border-box;vertical-align:middle;text-align:cen
ter}.mc_vtvc_th_live_b{background-color:#c80000;color:#fff;display:inline-block;padding:2px
8px;font:11px/14px Arial;border-radius:2px;text-
transform:uppercase;height:15px;width:26px;position:absolute;left:8px;top:110px}.isvctrl .isv
.mc_vtvc_ban_up{left:0;right:initial}.mc_vtvc_ban_lo,.mc_vtvc_ban_up{right:0}.vt_text.b_lRigh
t .b_lLeft{margin:0 0 0 1px;height:14px;line-height:14px;padding:2px 8px;background:rgba(0,0,0,
.75);border-radius:2px;font-weight:bold}.mc_vtthb{ width:100%;height:100%;background:rgba(0,
0,0,.7);position:absolute;top:0;bottom:0;left:0;right:0;display:table}.mc_vtth{ width:100%;padding
:0 16px;line-height:16px;color:#fff;text-decoration:underline;word-break:break-word;box-
sizing:border-box;vertical-align:middle;text-align:center;display:table-cell}.vt_text.b_lRight
.b_lLeft{margin:0 0 0 1px;height:14px;line-height:14px;padding:2px 8px;background:rgba(0,0,0,
.75);border-radius:2px;font-weight:bold}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleFor
DebuggingPurpose{top:0}.mc_vtvc_center_play{width:32px;height:32px;background-size:contai
n;position:absolute;margin:auto;bottom:0;top:0;left:0;right:0;box-shadow:none;border-radius:0}.m
c_vtvc_center_play.rmvgb{width:32px;height:32px;background-
image:none}.mc_vtvc_htb,.mc_vtvc_ht{display:none}.vt_onhv
.mc_vtvc_htb{display:table}.vt_onhv .mc_vtvc_ht{display:table-
cell}.mc_vtvc_center_play{display:inline-block}.vt_onhv
.mc_vtvc_center_play{display:none}.mc_vtvc .vtmu,.mc_vtvc .vtpl{bottom:163px}.vsarf
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.mc_vtvc .vtmu,.vsarf .mc_vtvc .vtpl{bottom:122px}.svarh #mmcar .mc_vtvc .vtmu,.svarh
#mmcar .mc_vtvc .vtpl{bottom:137px}.svarht #mmcar .mc_vtvc .vtmu,.svarht #mmcar .mc_vtvc .
vtpl{top:8px;left:8px}.mc_vtvc_center_play{background-image:url(data:image/svg+xml,%3Csvg
%20width%3D%22%20height%3D%22%20viewBox%3D%220%200%22%20fill%3D%
22none%22%20xmlns%3D%22http%3A%2F%2F .w3 %2F2000%2Fsvg%22%3E%0D%0A%20
%20%20%20%3Crect%20width%3D%22%20height%3D%22%20rx%3D%22%20fill%3D
%22black%22%20fill-opacity%3D%220.6%22%2F%3E%0D%0A%20%20%20%20%3Cpath%2
0d%3D%22M14.%.1923C13.%.209.62986%.%.%.4997V20.5C12%.%.%.%.8073L22.%.3073
C23.%.%.%.%.6926L14.%.1923Z%22%20fill%3D%22white%22%20fill-
opacity%3D%220.9%22%2F%3E%0D%0A%3C%2Fsvg%3E)}.mmlist .mc_vtvc{margin:10px
1px 0}.mmlist .mc_vtvc_con_rc{display:flex}.cardless .mmlist
.mc_vtvc_con_rc{height:112px}.mmlist .mc_vtvc .mc_vtvc_meta{display:flex;flex-
direction:column;justify-content:space-between;margin:0 10px 4px 12px;padding:0}.mmlist .mc_
vtvc_title{font-weight:400;font-size:16px;height:44px;line-height:22px;margin-bottom:0;margin-
top:0;color:unset}.mmlist .mc_vtvc_meta_row{font-size:13px}.mmlist .mc_vtvc
.mc_vtvc_meta_block_area{height:unset}.mmlist .mc_vtvc .vtmu,.mmlist .mc_vtvc
.vtpl{bottom:8px}.cardless .mmlist .mc_vtvc{box-shadow:none}.cardless.mmlist
.mc_vtvc_center_play{width:32px;height:32px}.cardless.mmlist .mc_vtvc_title{font-
size:16px;color:unset}.cardless.mmlist .mc_vtvc_meta_row{line-height:20px}.cardless.mmlist
.mc_vtvc_meta_pubdate{padding-bottom:2px;color:#666}.cardless.mmlist
.mc_vtvc_th,.cardless.mmlist .mc_vtvc_th.cico,.cardless.mmlist .mc_vtvc_th div.rms_img{border-
radius:6px}.cardless.mmlist .mc_vtvc_th{height:111px}.cardless.mmlist .mc_vtvc_htc{border-
radius:6px;overflow:hidden}#serpvidans.vasac.cardless{box-shadow:none}.cardless.mmlist
.mc_bc{padding:2px 8px;line-height:14px;border-radius:2px;font-weight:normal}.mc_vtvc: hover
.mc_vtvc_title{text-decoration:underline}.mc_vtvc_meta{box-sizing:border-box;display:inline-bl
ock;line-height:18px;position:relative;width:100%}.mc_vtvc_meta_block{bottom:0;position:absol
ute;width:100%}.mc_vtvc_meta_row{line-height:16px;font-size:11px;height:17px;overflow:hidde
n;text-overflow:ellipsis;white-space:nowrap}.mc_vtvc_meta_row a{display:inline-
block}.mc_vtvc_meta_row a:hover{text-decoration:underline}.mc_vtvc_meta_block_area{positio
n:relative}.mc_vtvc_meta_block,.mc_vtvc_meta_block a{color:#444}.b_dark
.mc_vtvc_meta_block{color:#edebe9}.mc_vtvc_meta_row>:nth-of-type(n+2)::before{content:"
"}.mc_vtvc_meta_row .mc_vtvc_meta_row_channel::before{content:"> "}.mc_vtvc_kmt_title{lin
e-height:18px;padding-bottom:4px;font-weight:bold;color:#00809d;text-transform:uppercase;font-
size:11px}.mc_vtvc_kmt,.mc_vtvc_con_rc.onhov .wkmt
.mc_vtvc_meta_row,.mc_vtvc_con_rc.onhov .wkmt .tbc_tt{display:none}.mc_vtvc_con_rc.onhov
.wkmt .mc_vtvc_title{max-height:18px;margin-
bottom:18px;overflow:hidden}.mc_vtvc_con_rc.onhov.mmsts
.mc_vtvc_title{visibility:hidden}.mc_vtvc_con_rc.onhov
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.mc_vtvc_kmt{display:block}.mc_vtvc_kmt_content .b_factrow{line-height:17px;font-size:11px;max-height:34px;overflow:hidden;text-overflow:ellipsis;padding:0 16px 0 0;color:#444}.mc_vtvc_meta .mc_vtvc_kmt_title{line-height:18px}.mc_vtvc_title:hover{text-decoration:none}.mc_vtvc_meta_pubdate{color:#444;padding-bottom:3px}.mc_vtvc_meta_channel{color:#444}.mc_vtvc_meta_w,.mc_vplvc_meta_w{position:relative}.mc_vtvc_meta_bg_w,.mc_vplvc_meta_bg_w{height:100%;width:100%;overflow:hidden;position:absolute;top:0}.mc_vtvc_meta_bg_w .cico,.mc_vplvc_meta_bg_w .cico{border-radius:0;overflow:visible}.dg_u .mm_vidch_th_c{overflow:visible}.dg_u .mm_vidch_th_bg img{margin-top:-20px}.emptyStyleForDebuggingPurpose{top:0}.mc_vtvc_meta_w .mc_vtvc_meta{background:rgba(255,255,255,.75)}.mc_vtvc_meta_bg_w img,.mc_vtvc_meta_bg_w .mc_vtvc_cb_w{filter:blur(25px);transform:scale(1.2)}body{--video-metadata-channel-color:#3c3c3c}body.b_dark{--video-metadata-channel-color:unset}.vsarf .mc_vtvc_meta_pubdate{color:unset}.vsarf .mc_vtvc_meta_channel{color:var(--video-metadata-channel-color)}.vsarf .mc_vtvc .mc_vtvc_meta_w .mc_vtvc_title,.vsarf .mc_vtvc .mc_vtvc_meta_w .mc_vtvc_title strong{font-weight:bold}.vsarf .mc_vtvc_meta_w .mc_vtvc_meta_row{font-size:13px}.emptyStyleForDebuggingPurpose{top:0}.vsarf .mc_vtvc_th .cico{height:132px}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.vtbc .mv_vtvc_play{display:inline-block;position:absolute;bottom:8px;left:9px;height:8px;width:7px}.vtbc .mv_vtvc_play_ext{background:url(/rp/Lp38sn_O4jegSK0IHxZVxyp-yKQ.png) -172px -31px;display:inline-block;height:8px;width:12px;position:absolute;bottom:8px;left:6px}.vtbc .pivot{height:20px;width:8px;min-width:8px}.vtbc .mv_vtvc_play{background:url()}.mc_bc_w{height:18px;padding:8px;text-align:right}.mc_bc{background-color:rgba(0,0,0,.75);padding:2px 8px;line-height:14px;color:#fff;display:inline-block;vertical-align:middle;border-radius:2px;font-weight:bold}.mc_bc_w .pivot{text-align:center;margin-right:1px;height:14px}.vsarr .mmgrid .mc_bc_w .mc_bc{background-color:rgba(0,0,0,.75);opacity:1}.mmsi{height:16px;width:16px;position:relative;top:5px;padding-right:var(--smtc-gap-between-content-xx-small)}.vrhdata{display:none}.mmgrid>div{width:197px;display:inline-block;margin-right:8px;margin-bottom:8px;box-shadow:0 0 1px rgba(0,0,0,.05);position:relative;vertical-align:top;overflow:hidden;white-space:normal;border-radius:6px}.vsarr .mmgrid>div,.vsarr1stbig .mmgrid>div{margin-right:8px;margin-bottom:8px}#serpvidansrr .mc_vtvc .mc_vtvc_meta{height:auto}#serpvidansrr .mc_vtvc .mc_vtvc_title{display:-webkit-box;-webkit-line-clamp:2;-webkit-box-orient:vertical}.mmgrid .mc_tc{border:0}.vsa
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solar power generation for self-use and surplus energy storage

```
.mmgrid>div:nth-child(3n){margin-right:0}.vsa .b_moreLink{padding-top:4px}#serpvidansrr
.mc_vtvc_meta_row{line-height:18px;font-size:100%;height:17px}.vsarr .mmgrid>div:nth-
child(2n){margin-right:0}#serpvidansrr .mc_vtvc .vtmu,#serpvidansrr .mc_vtvc
.vtpl{bottom:128px}.vsarr1stbig .mmgrid>div:nth-child(2){margin-right:0}#serpvidansrr.uipolish
.mc_vtvc_meta_pubdate,#serpvidansrr.uipolish .mc_vtvc_meta_channel,#serpvidansrr.uipolish
#vidans2 .b_videocard .video_metadata .video_source{color:#767676}#serpvidansrr #vidans2
.b_videocard .video_metadata_container,#serpvidansrr #vidans2 .b_videocard
.video_metadata_container .video_metadata>h3{width:100%}@media(max-
width:.9px){#serpvidansrr .mmgrid>div{width:168px;height:206px}#serpvidansrr .mmgrid>div
.cico,#serpvidansrr .mmgrid>div .cico .rms_img{width:168px;height:100px}#serpvidansrr
.mc_vtvc .mc_vtvc_meta{padding:12px}#serpvidansrr .mc_vtvc .mc_vtvc_title{height:32px;line-
height:16px;margin-bottom:16px}#serpvidansrr .mc_vtvc
.mc_vtvc_meta_block_area{height:34px}#serpvidansrr.mc_vtvc_meta_row{line-height:15px;font-
size:13px;height:15px}#serpvidansrr .mc_vtvc_meta_pubdate{padding-bottom:4px}#serpvidansrr
.mc_vtvc .vtmu,#serpvidansrr .mc_vtvc .vtpl{bottom:114px}#serpvidansrr #vidans2 .b_videocard
.videoPlayer,#serpvidansrr #vidans2 .b_videocard .videoPlayer .cico,#serpvidansrr #vidans2
.b_videocard .videoPlayer .cico .rms_img{width:343px!important;height:194px!important;margin-
right:0}}@media(max-width:.9px){#serpvidansrr
.mmgrid>div{width:124px;height:164px}#serpvidansrr .mmgrid>div .cico,#serpvidansrr
.mmgrid>div .cico .rms_img{width:124px;height:76px}#serpvidansrr .mc_vtvc
.mc_vtvc_meta{padding:8px}#serpvidansrr .mc_vtvc .mc_vtvc_title{height:32px;line-
height:16px;margin-bottom:12px}#serpvidansrr .mc_vtvc
.mc_vtvc_meta_block_area{height:28px}#serpvidansrr.mc_vtvc_meta_row{line-height:13px;font-
size:11px;height:13px}#serpvidansrr .mc_vtvc_meta_pubdate{padding-bottom:2px}#serpvidansrr
.mc_vtvc .vtmu,#serpvidansrr .mc_vtvc .vtpl{bottom:96px}#serpvidansrr #vidans2 .b_videocard
.videoPlayer,#serpvidansrr #vidans2 .b_videocard .videoPlayer .cico,#serpvidansrr #vidans2
.b_videocard .videoPlayer .cico .rms_img{width:256px!important;height:144px!important;margin-
right:0}#serpvidansrr .maskthumb .mc_bc_w{padding:8px 4px 4px
8px}}#serpvidansrr.withsplitline .mmgrid>div:nth-last-child(1),#serpvidansrr.withsplitline
.mmgrid>div:nth-last-child(2){margin-bottom:24px}#serpvidansrr.withsplitline .mmgrid{border-
bottom:1px solid #ecec;#ecec;margin-bottom:16px}#serpvidansrr #vidans2 .b_videocard
.video_metadata{max-width:auto;padding:12px 16px}#serpvidansrr #vidans2
.b_videocard{margin-bottom:12px;box-shadow:0 0 1px rgba(0,0,0,.05),0 2px 3px
rgba(0,0,0,.1);border-radius:6px}#serpvidansrr .b_rich{padding-top:0}#serpvidansrr #vidans2
.videoPlayer{border-radius:6px 6px 0 0;overflow:hidden}#serpvidansrr #vidans2 .b_videocard .vi
deo_metadata>h3{white-space:nowrap;overflow:hidden;text-overflow:ellipsis;-webkit-line-clamp:
1;line-height:15px;height:15px;font-size:13px;color:#000;margin-bottom:20px;font-
family:"Arial",Helvetica,Sans-Serif;font-style:normal;display:block}#serpvidansrr.vsarr1stbig
```



```
#vidans2 .b_videocard .video_metadata .actionmenu{display:none}#serpvidansrr #vidans2
.b_videocard .video_summary,#serpvidansrr #vidans2 .b_videocard .video_source{line-
height:15px}#serpvidansrr #vidans2 .b_videocard .videoPlayer .vtbc{right:0}.vrhc line.nhvpv
.pffvi,.vrhc line.nhvpv[data-tps="M"] .pffvt,.vrhc line.nhvpv[data-tps="L"] .pffvt{display:inline-
flex}.vrhc line.nhvpv .vrhc.pffv .vrhol{display:none}.vrhc line.nhvpv .vrhc.pffv .player_ol{back-
ground:var(--mai-smtc-background-ctrl-on-image-hover);transition:background-color .5s;display:f
lex;align-items:center;justify-content:center;padding:var(--smtc-gap-between-content-x-
small);gap:var(--smtc-gap-between-content-x-small);box-sizing:border-box}.mc_vtvc_th
img{transition:all .3s ease-out}.nhvpv+.mc_vtvc_th img{transform:scale(1.1)}.smtplayerhtml5{he
ight:100%;width:100%;overflow:hidden}.smtplayerhtml5 video{min-height:100%;min-
width:100%}.smtplayerhtml5 .videoplaying{background-color:#000}.smtplayerhtml5.hide{displa
y:none}.pffvt{display:none;color:var(--mai-smtc-foreground-ctrl-on-image-rest);font:var(--bing-
smtc-text-global-subtitle2-strong)}.pffvi{mask:url(/rp/ui07wU6K7FR_inzG7DRbP1i8fGo.svg)
center no-repeat;mask-size:12px;background:var(--bing-smtc-background-card-on-image-
default);width:20px;height:20px;flex-shrink:0;align-self:flex-start}[data-tps="L"]
.pffvt{font:var(--bing-smtc-text-global-subtitle2-strong)}[data-tps="L"]
.pffvi{width:22px;height:22px;mask-size:16px}[data-tps="S"] .pffvt{font-size:0}[data-tps="S"]
.pffvi{width:24px;height:24px;mask-size:24px;align-self:center}.hvpv.h5s .pffvt{display:inline-
flex}.hvpv.h5s .vrhc.pffv .vrhol{display:none}.hvpv.h5s .vrhc.pffv .player_ol{background:var(--
mai-smtc-background-ctrl-on-image-hover);transition:background-color .5s;display:flex;align-ite
ms:center;justify-content:center;padding:var(--smtc-gap-between-content-x-small);gap:var(--smtc-
gap-between-content-x-small);box-sizing:border-box}.pffvt{text-decoration:underline}.vrhcp .vrh
ol{position:absolute;width:100%;height:35px;max-
height:35px;bottom:0;left:0;padding:0;background:none;display:block;z-index:9}.vrhcp
.vrhol.hide,.vrhcp .vrhol .hide{display:none}.vrhot{white-space:nowrap;text-overflow:ellipsis;ove
rflow:hidden;display:inline-block;position:absolute;max-width:240px;height:18px;line-
height:14px;margin-left:8px;top:10px;left:0;right:0;border-radius:2px;padding-right:8px}.vrhot
div{display:inline-block}.vrhot nt{color:#fff;font-size:11px;font-weight:bold;background-
color:rgba(0,0,0,.75);padding:2px 8px;margin-left:0;top:0;box-sizing:border-
box;position:relative}.vrhc .icons{position:absolute;right:8px;top:10px;left:auto;bottom:auto;heig
ht:18px;display:inline-block;cursor:pointer}.vrhol.icons_1 .vrhot{margin-
right:27px}.vrhol.icons_2 .vrhot{margin-right:49px}.vrhol.icons_3 .vrhot{margin-
right:79px}.vrhol .vrhot nt,.vsb_tr_chd .vrhol.icons_1 .vrhot{margin-
right:0}.vpb{position:absolute;display:block;bottom:0;left:0;height:4px}.vpb
div{position:absolute}.vpb nt{width:0;background:#fff}.vpb
nt.test{display:none}.vpb.back{background-color:#999}.vrhcp .vrhol.npb{height:36px;max-
height:36px}.vrhol .vadda{width:22px;height:18px;padding:0;margin-right:0;margin-left:2px;bott
om:0;position:relative;display:inline-block;z-index:1;background:rgba(0,0,0,.75);border-
```



```
radius:2px;overflow:hidden}.vrhol .vadda.hide{display:none}.vrhol .vadda .mc_vfaa{margin:3px
5px}.ricons .vol{float:left}.ricons .adultFlag{float:right}.vol{width:22px;height:18px;bottom:0;m
argin-left:1px;margin-right:1px;position:relative;display:inline-block}.vol.hide,.vol
.hide{display:none}.vol .bg{background:rgba(0,0,0,.75);border-radius:2px}.vol.bg,.vol
nt{position:absolute;bottom:0}.vol .vol.bg.volnb{border-radius:0 0 2px 2px}.vol
.volsliderHandle.bg{border-radius:2px 2px 0 0}.vol nt .volsliderHandle{height:70px;display:none;
width:22px;float:left;bottom:18px;position:absolute;display:block}.vol nt
.volsliderHandle.hide{display:none}.volsliderHandle .vsb{height:54px;width:4px;background-
color:#999;margin:9px auto 8px;position:relative;display:block;border-
radius:2px}.volsliderHandle .vsh{height:6px;width:14px;padding:9px 7px 9px 7px;margin:0
-12px;display:block;position:absolute;top:30px}.volsliderHandle
.vsh.hide{display:none}.volsliderHandle .vshi{height:4px;width:14px;background-
color:#fff;border-radius:2px}.volMuteIcon{width:16px;height:14px;margin:2px 4px;float:left}.vol
MuteHandle{width:22px;height:18px}.vo{background:url(/rp/fFZxBXEIP9WYOO0jhTaElyLhE
VU.svg) no-repeat}.vm{background:url(/rp/fsX-ZVd03wB2TL0vmQJxSp4U9vs.svg) no-
repeat}.vl{background:url(/rp/YXYMPC1Rry_XJGc7Yg8lR4B2eEs.svg) no-
repeat}.vf{background:url(/rp/NosrlR4amKTs1zYxWy3laZN3HRk.svg) no-
repeat}@media(forced-colors:active){.vol{forced-color-adjust:none}}.vrhc
.vt_vp,.vrhc.popout .vt_vp,.vrhc.mousefollow
.vt_vp{position:absolute;bottom:0;border:hidden;padding:0;top:0;left:0;z-index:3}.vrhtc
.hide{display:none}.vrh_clc .vt_vp,.vrh_clc .vrhtc .vrhi,.vrh_clc
.player_ol{cursor:pointer}.vrh_clc .cico{border-
radius:0}.vrhtc{border:hidden;top:0;left:0;padding:0}.vrhc.mousefollow .vrhtc,.vrhc.popout
.vrhtc{background-color:#999}.vrhtpc.load
.player_ol{background:url(/rp/J_o2maogFDeUOsovPJL-ofEuxJ4.gif) center center no-
repeat}.vrhc line .vrhtc .vrhi,.vrhc.popout .vrhtc .vrhi,.vrhc.mousefollow .vrhtc .vrhi{position:abso
lute!important;border:hidden;z-index:2;padding:0;left:0;top:0}.player_ol{position:absolute;width:
100%;height:100%;bottom:0;border:hidden;z-index:7}.vrhc.popout,.vrhc line,.vrhc.mousefollow{
border-radius:6px;overflow:hidden;display:table-row-
group;background:none}.vrhc.popout,.vrhc.mousefollow{z-index:4;box-shadow:0 4px 4px
rgba(0,0,0,.1),0 2px 80px rgba(0,0,0,.2)}.vrhc line{z-index:1;margin:0}.vrhc.popout,.vrhc
line{position:absolute;top:0}.vrhc.popout{border:1px solid #fff}.vrhc.mousefollow{position:fixed
}.vrhcp{position:relative;top:0;left:0;display:table-row}.vrhcp
.vrhtc{position:relative;overflow:hidden}.vrhc.hide{display:none}@keyframes
vh_fadein{from{opacity:0}to{opacity:1}}.vrhc:not(.hide){animation:vh_fadein 250ms}.vrhc line
img{color:transparent}.vrhc line.fullsize{height:100%}.vrhc,.vrhc: hover,.vrhc: link,.vrhc: active,.vr
hc: visited{color:#000;text-decoration:none}.vrhc.vrh_clc{cursor:pointer}a.hover-anchor{display:
block;height:100%;width:100%;text-decoration:none}.vrhstat{height:0;overflow:hidden}Videos
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solar power generation for self-use and surplus energy storage

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